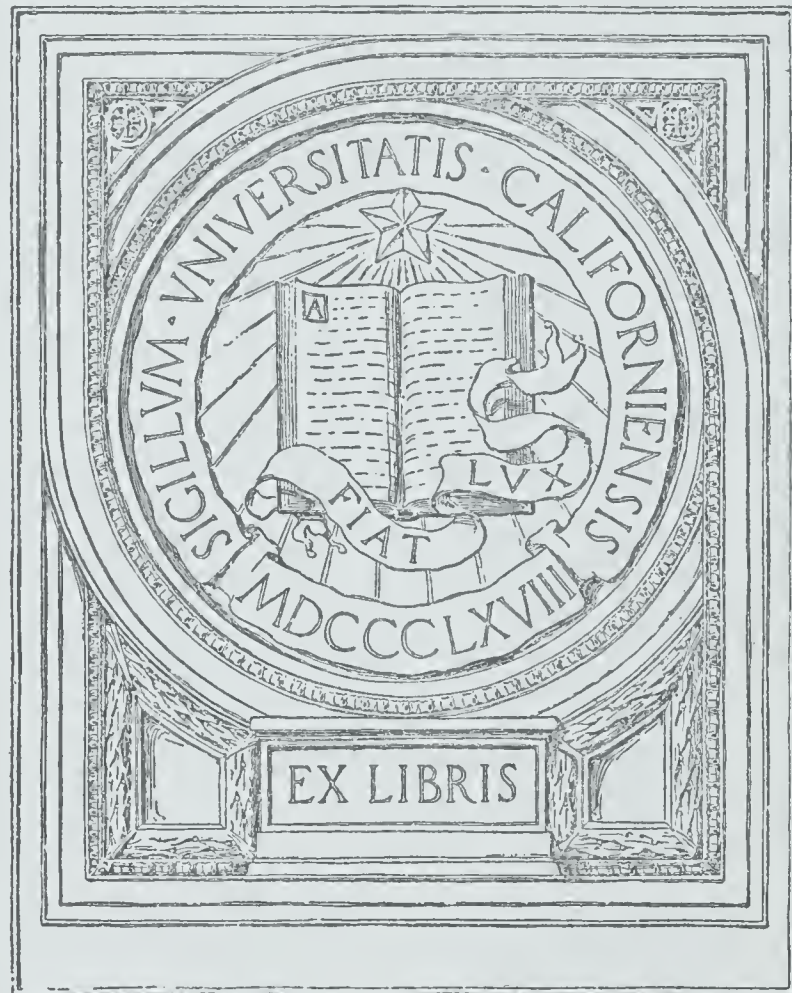
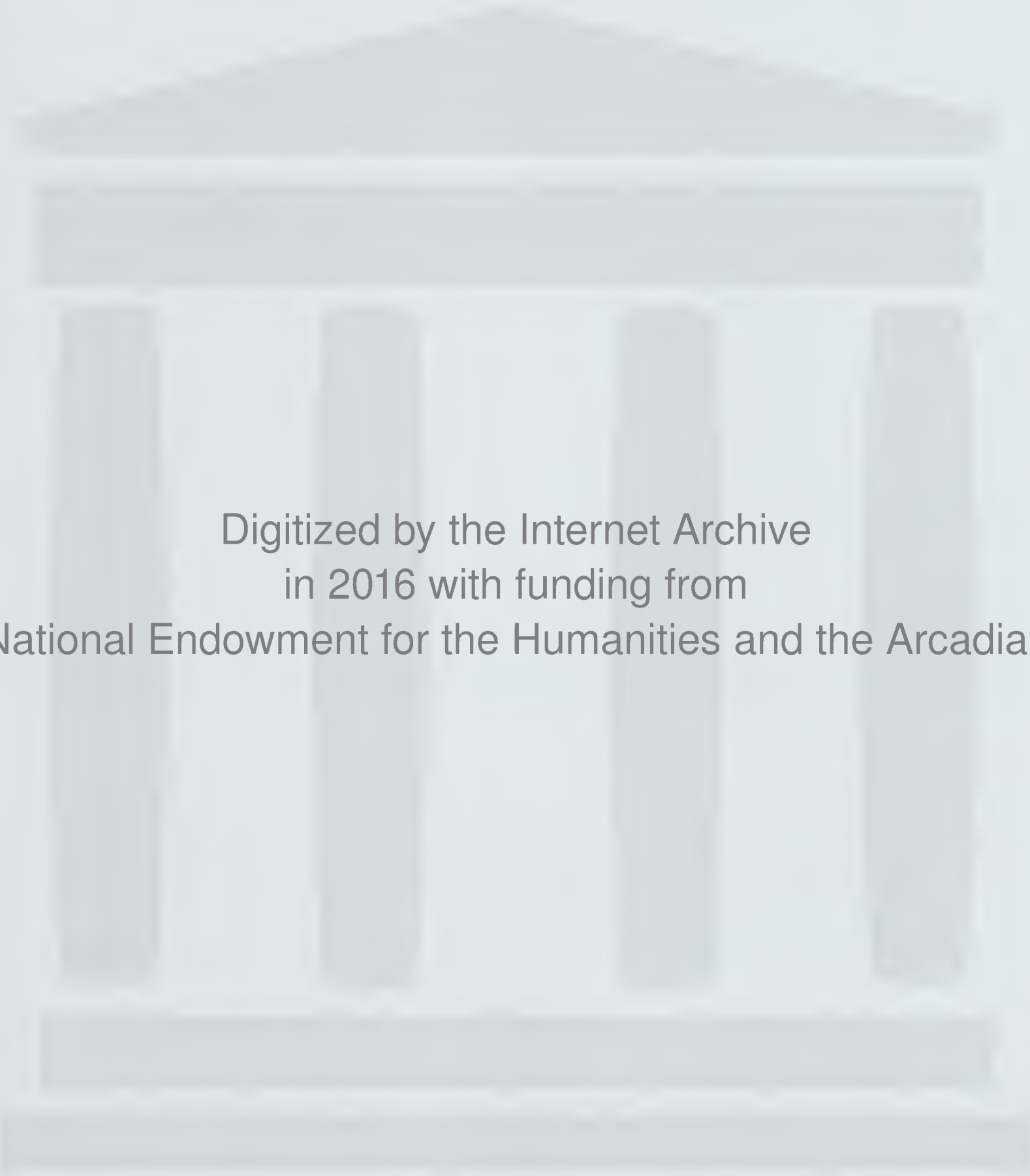


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SURGICAL TREATMENT OF INTERNAL CAROTID OCCLUSION

CHAMP LYONS, M. D.

and

JAMES GARBER GALBRAITH, M. D.

Birmingham, Alabama

A few years ago Alvarez¹ enunciated his concept of "little strokes" and focused attention upon their prognostic significance for ultimate encephalomalacia. It has been generally accepted that these are thrombotic episodes due to atheromatous changes and are distinguishable from embolic or hemorrhagic strokes. One of the most startling developments of very recent years is the recognition that these prodromal "little strokes" are not usually associated with occlusion of the truly intracranial vessels. The predominant initial lesion is atheromatous obstruction or stenosis of one or more of the major vessels *in the neck* and the "little stroke" represents a transient cerebral ischemia, a sort of "intermittent claudication" of the brain.^{2, 3, 4, 5, 6, 7} Although some brain damage may follow such an episode, significant infarction is associated with failure

of collateral circulation through the circle of Willis or extension of the thrombus in the neck.

The initial studies identified the internal carotid at or just above the carotid bifurcation, in the region of the sinus, as the important site for atheromatous occlusion. Gradual occlusion by thrombosis and sudden occlusion from subintimal dissection have both been recognized. Arteriography of the common carotid rendered identification of this lesion relatively simple.⁸ The syndrome of "internal carotid occlusion" emerged and has recently been summarized by Buskirk.⁹ The symptoms are largely those of middle cerebral arterial insufficiency and occur episodically with transient mental confusion or syncope, slurred speech or aphasia, and partial or complete hemiparesis.¹⁰ Blurred vision, diplopia, or transient loss of vision may also occur.¹¹ Recovery is usually prompt with only minor neurologic deficits.

As a counterpart of middle cerebral insufficiency due to occlusion of the internal carotid in the neck, there may be basilar insufficiency due to occlusion or stenosis of the vertebral artery.^{12, 13} The segment of the vertebral artery at its point of origin from the subclavian has been identified as

From the Department of Surgery, Medical College of Alabama. Read before the Association in annual session, Mobile, April 19, 1957.

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a prominent site for atheromatous changes, but this localization of disease is not as striking in the vertebral artery as it is in the internal carotid. Arteriograms of the vertebral are technically more difficult and, as presently accomplished, fail to visualize the important initial segment of the artery. There is also considerable variation in the size and collateral supply to the vertebral in the neck. The syndrome of basilar insufficiency due to vertebral occlusion is characterized by ataxia and other cerebellar signs and is far more likely to produce irreversible brain damage from anemic infarction.

The studies of Hutchinson and Yates¹³ have demonstrated the frequent coincidence of obstruction in the neck of both the internal carotid and the vertebral arteries. It seems likely that this "carotico-vertebral" syndrome is responsible for an even higher incidence of irreversible brain damage and for the more complex neurologic deficits seen in association with more readily apparent occlusion of the internal carotid. Additionally, there are isolated instances wherein bilateral internal carotid occlusions have been compatible with symptomatic survival until vertebral occlusion has forced a fatal issue. It is clear that many of the current variations and discrepancies in the internal carotid occlusion syndrome find obvious explanation in the "carotico-vertebral" concept. This differential diagnosis has obvious importance in the selection of patients for surgical relief of carotid obstruction.

Almost the only *intracranial* vessel especially vulnerable to significant atheromatous occlusion is that extradural, tortuous segment of the internal carotid lying within the cavernous sinus, a segment designated by radiologists as the carotid siphon. Thrombosis in this segment, from published observations and our own experience, accounts for no more than one-sixth of the instances of carotid occlusion. This thrombosis, however, is usually associated with retrograde extension so that the arteriographic study of the common carotid identifies only the fact that the internal carotid is occluded in the neck.¹⁴ It follows that retrograde thrombosis from obstruction of the carotid siphon may be indistinguishable from segmental occlusion of the carotid sinus by x-ray studies. To date, we have accepted operative exploration of the internal carotid in the neck as the best approach to this problem.

It is important to recognize that the circle of Willis may derive significant collateral apart from the vertebral arteries in an instance of carotid occlusion. Among these, the most important are the contralateral internal carotid and the

ipsilateral external carotid.¹⁵ The collateral pathway from the external carotid is by way of the ophthalmic artery and the anterior cerebral, and the transient blindness, so frequently noted at the onset of symptoms, is commonly attributed to a coincident reversal of arterial flow in this artery. The external carotid may also supply collateral to an obstructed vertebral by way of the occipital branch of the external carotid. Hence, it is desirable to preserve the arterial flow through the external carotid during the surgical treatment of internal carotid obstruction.

There have now been seven individual case reports, with complete success in two, of attempts to restore arterial flow in the internal carotid.^{16, 17, 18, 19, 20, 21, 22} These have been direct attacks upon the obstructed segment by thrombendarterectomy or excision with replacement by arterial homografts or venous autografts. In all of these direct operations, temporary occlusion of the common carotid has been necessary. Hypothermia has been used for the more successful procedures, attesting the importance of the collateral through the external carotid. It occurred to us that the hypotension so commonly encountered with hypothermia was also undesirable, for there are reports of cerebral infarction occurring during hypotensive crises in patients with previously asymptomatic carotid occlusion. Further, there is strong evidence that an end-to-side bypass, as compared to an end-to-end suture, allows the use of an arterial substitute of larger lumen and with lesser danger of late thrombosis. For

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INTERNAL CAROTID OCCLUSION

these reasons, we elected to perform a shunt from the subclavian to the patent portion of the cervical segment of the internal carotid as the operation of choice. This has the advantage of avoiding occlusion of the external carotid, permitting the blood pressure to be maintained, and allowing the use of an arterial substitute of adequate lumen without resort to hypothermia.

RESULTS

Six patients have now undergone this operative procedure and four have been satisfactorily rehabilitated in that they have no significant neurologic deficits. The results are summarized in Table I.

been satisfactory in that there are no significant neurologic deficits and the symptoms have been relieved. The observation of improved intellectual function, as reported by friends and families, is attested by effective resumption of preoperatively abandoned job responsibilities.

DISCUSSION

Anatomic studies of patients with the "stroke" syndrome have defined extracranial thromboses in the carotid and vertebral arteries in the neck as a major cause of the arterial insufficiency of the brain. The dominant sites for segmental obstruction are at the bifurcation for the internal carotid and at the point of origin of the vertebrals from

Patient	Duration	Symptoms	Back-Bleeding	Date of Operation	Result
1. M, 67	8 months	Headache Audible bruit Episodic paresis	0	Aug. 1956	Relieved
2. M, 66	5 years	Headache Episodic aphasia Episodic paresis	0	Aug. 1956	Relieved initially D. 4 mo. basilar artery thrombosis
3. M, 64	4 months	Headache Persistent paresis	Thrombosed	Sept. 1956 Exploration only	No improvement Siphon occluded
4. F, 67	1 month	Aphasia Facial paresis	†	Sept. 1956	Relieved
5. M, 59	2 years	Episodic blindness Episodic aphasia Episodic paresis	†	Dec. 1956	Relieved
6. M, 48	6 weeks	Episodic paresis	†	Jan. 1957	Relieved

TABLE I—SUMMARY OF PATIENTS

In one patient (Case No. 3), the cervical portion of the internal carotid was completely occluded by retrograde thrombosis from the siphon. There was no atheromatous plaque at the sinus and no shunt was possible. This patient continues to live without improvement.

In another patient (Case No. 2), a shunt was easily established although there was no back-bleeding from the distal end of the carotid. Immediately postoperatively, there was disappearance of the presenting symptoms of aphasia and hemiparesis. Four months later, he returned with dizziness, unsteadiness of gait, and nausea consistent with cerebellar infarction and died with progression of his disease. An autopsy was refused, but the clinical pattern of basilar thrombosis due to vertebral insufficiency was clearly evident. This patient was the only one who developed dizziness and syncope on brief compression of the contralateral carotid. We intend to explore the integrity of this sign in the identification of co-existent vertebral insufficiency in the "carotico-vertebral" syndrome.

In the remaining four patients recovery has

the subclavian. The vessels distal to the point of occlusion are frequently patent and present an opportunity for revascularization of the brain.

This report is based upon six cases with internal carotid occlusion and significant neurologic deficits. Five of these patients presented patent internal carotids above the point of occlusion and were amenable to a by-pass operation with revascularization from the subclavian. Restoration of blood flow through the carotids was associated with significant improvement in the neurologic picture and return to previous activity.

Patients with isolated occlusion of one internal carotid are obviously the candidates of choice for this operation. The diagnosis cannot be established by palpation of the vessels in the neck and requires carotid arteriography. The electroencephalogram should show only minor variations from the normal, and is not otherwise of importance in the evaluation of operability. At the present time, emphasis in selection of patients is placed upon episodic symptoms with significant recovery between attacks. Others in our group have explored patients with established paralyses only to

discover a far advanced process not amenable to surgical relief. It is our opinion that the best results are to be anticipated in patients with episodic arterial insufficiency and without extensive infarction. An analogy exists in the treatment of peripheral vascular disease wherein arterial bypass relieves intermittent claudication but salvages few, if any, gangrenous feet.

Co-existent stenosis of the vertebral artery is usually associated with greater brain damage and reduces the likelihood of prolonged benefit from carotid by-pass alone. The clinical recognition of associated vertebral stenosis presents problems as yet not completely resolved, but significant progress is recorded and envisioned. A surgical approach for the revascularization of the vertebral artery is also under consideration.

It seems likely that a coincident syndrome of cerebral arterial insufficiency should be kept in mind whenever patients present with peripheral vascular disease. One of our patients (Case No. 6) entered primarily for relief of intermittent claudication of the leg and developed accentuation

of his hemiparesis as the result of a hypotensive episode during the successful surgical treatment of obstruction of the superficial femoral artery. Vulnerability to cerebral infarction during hypotensive episodes gives considerable priority to the correction of carotid insufficiency in the management of many elderly patients requiring elective surgical treatment.

CONCLUSIONS

1. Segmental occlusion of the internal carotid artery *in the neck* has been identified as a common cause of Alvarez' "little strokes."
2. The cerebral ischemia associated with occlusion of the internal carotid has been relieved by a vascular shunt from the subclavian to the patent carotid above the point of occlusion.
3. Significant relief of neurologic deficits occurs after revascularization of the brain.
4. Patients should be selected for this operation on the basis of symptoms of episodic arterial insufficiency before major infarction has occurred.

MEDICINE'S SOCIO-ECONOMIC POLICIES

DAVID B. ALLMAN, M. D.

President

American Medical Association

Atlantic City, New Jersey

More than 450 years ago, when the Aldine Press of Venice, Italy, was established, a placard was placed on the office door. In a few words the placard gave this good advice to all visitors:

"Talk of nothing but business, and dispatch that business quickly."

My first intention is to talk about the business of medicine and some of the socio-economic issues confronting our profession. My second intention is to dispatch that business forthwith.

MEDICAL COSTS

In the past few weeks it seems to me there has been more talk and printed matter on the subjects of spending, inflation, budgets, costs, taxes, and wages than any time in recent history. All Americans naturally are interested in and concerned with these topics involving their money. As citizens first, doctors are concerned too.

One of the "money" topics currently in the news and in person-to-person conversation is the alleged high costs of medical care. I remember that last summer a national news story proclaimed that medical costs had increased 32 per cent over the 1947-49 period, while the general cost of living had risen only 16 per cent. While these figures were

correct and official, my own experience and my association with other physicians told me something was wrong with this picture of medical costs.

A closer look almost immediately revealed that the whole story of medical costs had not been given. Medical costs are just one part of the inflation story of our national economy. That story began before World War II, not in the 1947-49 period, and we must consider the whole era of inflation, not just the last five or 10 years of it. Naturally, during two decades of national inflation, hospital and medical costs have risen. However, by comparing costs today with those of the 1935-39 period—not with just those of the last few years—we get a true picture of how far and how fast costs have gone up.

For example, we find the entire consumer price index, including all commodities and services, has risen 91.4 per cent since 1935-39. Breaking this down, we see that all commodities have more than doubled in price—105 per cent. Meanwhile, all services have increased about 80 per cent.

What about medical costs? Well, medical care and drugs have gone up less than 78 per cent! Physicians' fees less than 66 per cent! House calls by general practitioners only 55 per cent! Surgical fees for an adult appendectomy less than 52 per cent!

Delivered before the Association in annual session, Mobile, April 19, 1957.

How does this compare with other commodities? Food, for example, went up 124 per cent. Furniture prices jumped 123 per cent. Men's street shoes rose by 171 per cent, and new cars more than doubled in price.

The short-range comparison between the present and the recent 1947-49 period gave the impression that cost increases in medical services were too great. However, by looking at the long-range picture, or by taking in the whole period of inflation, we get a more realistic picture of medical costs. And that picture shows medical costs to be below the rises in commodities or services.

The long-range comparison also reveals that the bulk of the price rise of most commodities occurred before or during the years 1947-49. The greater part of the price rise of most services has occurred since 1949. To me this indicates that medical costs have been late movers in the general upward price trend.

It also indicates to me that medical care is still one of the greatest bargains in America. And remember, I have touched only on the actual cost of medical care. I have not mentioned the improved quality of the care that has brought faster recovery from sickness, more rehabilitation of the sick and injured, greater prevention of illness, and longer life.

Of course, medical care occasionally does not look like a bargain, for there are individuals or families who annually incur heavy medical expenses because of a long, severe illness or because of a succession of illnesses. All individuals or families just do not incur medical expenses at the same rate annually. There are years of low medical expense and high medical expense. This situation has always existed, and undoubtedly always will.

VOLUNTARY HEALTH INSURANCE

To meet this problem of up-and-down medical expenses, the American people have adopted the mechanism of voluntary health insurance. Its growth and development over the past 25 years, and especially during the post-war years, have provided one of the brightest chapters in our economic history.

More than 112 million Americans, or more than two-thirds of the population, are protected or "covered" by some form of voluntary health insurance. This means that, in a little more than 25 years, almost as many people have purchased insurance to help pay the costs of hospital care and physicians' services as comprised the total United States population in 1930 when the voluntary health insurance movement began.

Today we have 112 million persons who have purchased protection against hospital expenses;

96 million with surgical expense coverage; 63 million with medical expense policies, and approximately 10 million with major medical expense insurance.

The heaviest public demand now is in this last category—major medical expense coverage. How this type of insurance develops and works may depend to a large degree on our profession. Certainly no type of insurance will work if we use it as a basis, or an excuse, for revising upward the usual fees for personal services.

Both patient and doctor must remember that the purpose of health insurance is not to assure the payment of a fee to the provider of a service, nor is it to relieve the insured person from any individual responsibility for financing his health care costs. We cannot expect of insurance those goals which are unrealistic. Insurance's purpose is to play a valuable part in helping an individual assume and discharge his responsibilities for his health care expenses as well as the expense of those who are dependent upon him.

Voluntary health insurance has developed and expanded because Americans demanded protection against the unexpected and unwanted expense of sickness and injury. Today the voluntary health insurance industry is a magnificent economic structure. Let's not do anything to undermine or destroy it, but rather let's work for its continued growth and improved protection for all people.

FEEES

From medical costs and voluntary health insurance, it is logical to look at the matter of fees, a subject to which the public gives a great deal of attention. And we must do likewise.

In a public opinion survey conducted for the American Medical Association, an independent firm found that only 16 per cent of the public believe their own doctors charge too much. But 43 per cent said most doctors' fees are too high. Doctors themselves expressed the opinion that their charges are that aspect of medicine criticized most by the public. And most of you probably will agree with that.

While the survey disclosed that the public is more critical of hospital and drug costs than physicians' services, I don't think we should take comfort in that conclusion. Just because the other fellow is getting hit harder than we are is no reason for us to ignore the situation.

I already have shown that medical care is the greatest bargain in America, and that the increases in medical costs during the entire inflationary period were below the rises in costs of other commodities and services. These items we can use effectively in telling the true story of

medicine and medical costs. But each of us can do even more. We can discuss costs of treatment and surgery with our patients.

The reason most patients complain about a fee is that they simply do not understand what they are getting for their money. If we all take the time to inform them, we'll be doing a great service for every patient, for every fellow physician, and for the entire medical profession.

Frankly, the failure of many doctors to discuss fees with patients has done as much as anything to stimulate the demand for standardized fees or fee schedules. And continued failure to discuss fees will put the public squarely behind the efforts of outsiders to fix fee schedules.

FEE SCHEDULES

Already there are forces that have pressured the medical profession into devising fee schedules. These include the local and federal governments with their legislative programs and the insurance companies with their voluntary health insurance plans.

Whether the standardization of fees by initiation of the medical profession itself is good or not remains to be seen. We do know there have been a number of county medical societies that have established minimum, standard, average, or usual fee schedules. The terminology used in any schedule is extremely important, and unfortunately there has been much misunderstanding about various terms.

MINIMUM fee schedules are accepted to mean that no charge is made less than that stated in the schedule, but that additional amounts may be charged, depending upon the training and accomplishments of the physician as well as the ability of the patient to pay.

STANDARD fee schedules indicate that the fee is the acceptable charge which will be made by the medical profession for specific procedures.

AVERAGE fee schedules are interpreted to mean that the charge may fluctuate either up or down.

USUAL fee schedules indicate that, unless a discussion of fees with the patient has taken place, the individual physician then pledges to accept as full payment the amount indicated under the usual fee schedule.

As all of you well know, the enactment of the Medicare program required state medical associations to adopt a working fee schedule. While the adoption of such a schedule was a necessity if the government was to carry out the program voted by Congress, nevertheless there are many who feel the Medicare fee schedules ultimately will raise the cost of medical care.

For example, it is unlikely that the physician in

Birmingham or Montgomery with his higher overhead need establish the same fee as physicians in Waterford. Yet because a statewide fee schedule has been set to meet the needs in metropolitan centers, it tends to encourage physicians in smaller communities or in rural areas to raise their fees to meet the established schedule. It is questionable whether this is sound procedure.

My purpose in raising the issue of fee schedules is not to harangue about the pros and cons of such arrangements, but I do want to sound a word of warning to doctors everywhere to be on guard against outsiders or third parties that seek to write schedules for us. If doctors in a county or a state wish to establish some kind of a fee schedule, professional service index, or relative value schedule, that is their business. And to me there is no one more capable of developing satisfactory fee schedules than doctors themselves.

I believe that all of us must be alert to those eager beavers in government, in insurance, or in labor and management who would like to establish our fees for us.

Because fees are that aspect of medicine coming under most criticism by patients, we cannot afford to be disinterested in the problem. We cannot afford to be apathetic or lackadaisical about third-party interference in this area. If we are, we may awake some day to find the "outsiders" have done a job for us. And I'm willing to wager that few of us are going to like the job they've done.

GOVERNMENT IN MEDICINE

For years we have been up against the whole problem of third-party encroachment into the private practice of medicine. The largest third-party, without a doubt, is government at all levels, but primarily at the national level.

Because government intrusion into medical services has been labeled "beneficent," there has been wide acceptance by legislators and the public of government's role in medical and health affairs. Indeed, the trend appears to be picking up speed, rather than slowing down.

This whole matter of government entrance into medical affairs seems to be a vicious circle. The public on the one hand is attracted by the government's gifts, and the government and the politicians offer more gifts to the voting public. Neither seems concerned with the preservation of individual freedoms, a sound economy, or good medicine.

Consequently, the government continues to spend more and more money on health and medical matters. This may be good politics, but it leads to bad medicine.

Associate Justice Louis Brandeis once warned Americans that "experience should teach us to be

most on our guard to protect liberty when government's purposes are beneficent." Experience has taught us in medicine!

In other countries, government medicine started out by covering limited segments of the population, and ended up as full-fledged socialized medicine for all. There are serious evils to any such system, especially in light of the recent developments in Great Britain with the government administration of the practice of medicine.

Government, of course, has some responsibility for the health of its citizens, but, in general, government programs should be limited to those which cannot be carried out by private resources. The care of the indigent and the mentally ill are two legitimate areas, but, even then, local financing should take preference, with the federal government entering only when absolutely necessary.

In short, the government's purpose should be to stimulate the development of private resources and to promote a climate in which private effort and ingenuity can exert their full effect.

HOSPITALS IN MEDICINE

A second large third-party that has gone into the field of medical service has been the hospitals. The danger to private practice is the apparent willingness of some hospitals to provide medical services under the guise of hospital care.

For years, in some hospitals, the services of medical specialists like pathologists, radiologists, and anesthesiologists have been considered as hospital services, not medical services. In some places there is talk that hospitals want state legislatures to pass legislation enabling hospitals to employ all categories of physicians.

In various hospital quarters, there is the belief that patients are patients of hospitals, and not patients of doctors.

And some hospital administrators firmly believe the hospital is the health center of the community, and consequently physicians should be employed to provide all services pertaining to the physical well-being of all persons in the hospital's care.

With this philosophy in mind many new hospitals are being built with private-practice wings for salaried staffs. And some predictions have gone so far as to foresee hospital staffs composed entirely of salaried physicians.

On the other side of the coin is the idea that the hospital should not be the center of medical practice, that the important aspect is the care of the ambulant patient, and that hospitalization is something incidental to this care.

Undoubtedly, the best solutions to these and other hospital problems will come at the local

level. There is no grand pattern to cover all situations. But our goal should be the same: Medical services must remain medical services. While the hospital has an important role to play in the care of the sick, it must never come between doctor and patient.

CONCLUSION

In the past 20 minutes or so I have attempted to "talk of nothing but business"—discussing medical costs, voluntary health insurance, fees and fee schedules, government encroachment on the private practice of medicine, and hospital medical services. Each is a socio-economic issue for our profession; each is a public relations issue, too. How well we get our story to the public and how well we resolve the issues will depend upon each individual physician, and not necessarily upon officials of county, state, or national medical associations.

No individual contribution to the good of the profession and to the welfare of the patient is too small. A hundred small opportunities are yours and mine each day. Let's not neglect them, for tomorrow they will be gone. And by all means, let's not surrender our own personal jobs to our colleagues, or our professional tasks to outsiders.

Perhaps I have not dispatched my business as quickly as I should have, but I hope you will believe that my intentions at least were good. Thank you.

Doctor Reports Allergy to Common Ivies—Two cases of allergy to Algerian ivy, a common house and garden plant, have been reported by a Pasadena, Calif., dermatologist.

Writing in the American Medical Association's May Archives of Dermatology, Dr. Clete S. Dorsey said he knows of no other reported cases of dermatitis from Algerian ivy.

Both patients developed severe, itchy skin eruptions after contacting juice from the stems and leaves of the plant. Touching the unbroken leaves did not produce a reaction.

After recovering from the Algerian ivy dermatitis, both patients became sensitive to the common English ivy, a close relative of Algerian ivy. This suggested that patients who have been sensitized by one of the plants will also be allergic to the other, he said.

Dr. Dorsey said he has a "strong suspicion" that contact dermatitis from the English and Algerian ivy is "not rare," since they are among the most widely cultivated of all plants.

Variants of English ivy grow throughout the United States. Algerian ivy, which has become quite popular in the last 10 years, grows outdoors only in the West Coast states. However, most of the large-leaved variegated house ivies are Algerian ivies and can be found anywhere in the country.

He noted that many plants are called ivies without being related to these "true ivies." For example: Kenilworth ivy, Boston ivy, German ivy (sometimes called Japanese ivy), ground ivy, marine ivy, Cape ivy, poison ivy, or philodendron (a common houseplant).



USE OF POLIO VACCINE IN EPIDEMICS WITHOUT UNDUE RISKS, SURVEY SHOWS

Poliomyelitis vaccine may be used under epidemic conditions with no important risk, it is indicated by results during a serious outbreak in Chicago and suburban Cook County in the summer of 1956, when more than 1,500,000 doses were administered.

This was reported by Dr. Neal Nathanson, chief of the poliomyelitis surveillance unit, Communicable Disease Center, Atlanta, and former Chicagoan, who presented his findings at the 117th annual meeting of the Illinois State Medical Society.

The 1956 outbreak was the third heaviest ever to occur in Cook County, slightly higher attack rates having been experienced in 1952 and 1943, he reported. The peak was reached in August, whereas in previous years the worst was in September or October. There was a larger incidence in nonwhites and a shift in age distribution toward the under-five group.

"In Chicago, the Board of Health initiated an intensive vaccination program in July, which reached its peak in August when over 1,000,000 doses of vaccine were distributed," Dr. Nathanson said.

"A considerable number of cases occurred among vaccinated persons, but the majority of these had received only the first of the recommended full course of three doses of vaccine.

"Data were reviewed for any evidence that vaccination influenced the subsequent development of paralysis. Among paralyzed vaccinated cases there was no significant difference between the frequency of involvement of the inoculated arm as opposed to the opposite uninoculated arm.

"Thus, there did not appear to be any important risk associated with the large-scale use of poliomyelitis vaccine under epidemic conditions.

"Because of limitations of the data and important potential sources of bias, it was not possible to evaluate vaccine effectiveness by any comparison of attack rates among vaccinated and unvaccinated persons. However, it was shown that among vaccinated cases the frequency and severity of paralysis was less than among unvaccinated cases."

Editorials

The report of Dr. Nathanson was based on a cooperative study by the Chicago Board of Health, the Cook County Health Department, the Illinois State Health Department and the U. S. Public Health Service, with the assistance of the Chicago Medical Society and many other professional and lay organizations.

UNIFORM HOSPITAL INSURANCE CLAIM FORMS

More than 200 insurance companies are now using the two uniform hospital insurance claim forms developed by the Health Insurance Council to simplify the processing of accident and sickness claims.

According to a printed report prepared by the Council for hospital administrators and released recently, these companies write over 80 per cent of the group accident and health insurance and more than 50 per cent of the individual and family protection provided by the health insurance business.

In addition, the Board of Trustees of the American Hospital Association has recommended the use of the Council's uniform insurance reporting forms.

A similar survey by the Council on the development of uniform claim forms for physicians' reports is now in preparation. The principal objective, according to the Council, is to lessen the demand on doctors for medical information needed to process individual and group claims. Approval of these forms by the Council on Medical Service of the American Medical Association has been announced.

The hospital claim forms—developed in collaboration with hospital representatives—are the "Group Hospital Insurance Form," identified by the symbol HAP-4, and the "Individual Hospital Insurance Form," designated as IHF-1. Replacing a great variety of forms used by hundreds of insurance carriers, the basic forms are standardized in language and format, and ask for a minimum of medical information.

The fifteen-page Health Insurance Council report, entitled "Simplified Health Insurance Claim Forms," is divided into two parts. Part I describes the progress and objectives of the uniform forms

program. Part II includes reproductions of the forms and an analysis of the questions which hospitals are requested to complete.

The Council launched the project three years ago through its Uniform Claim Forms Committee, in response to the urgent need to "develop uniformity in the information requested of hospitals in support of hospitalization insurance claims." Problems arising from the increasing burden of paper work in a period marked by phenomenal growth of health insurance coverage—more than 60 million persons are currently insured by the nation's insurance companies—had been a source of mounting concern to hospital administrators.

Previously the Council had drafted the "Group Hospital Insurance Form" (HAP-4). Already in widespread use at the time the uniform claim forms program was initiated, the HAP-4 form was continued, and a separate form, IHF-1, was prepared for use with the individual and family hospital expense policies.

The "ideal" solution—one simple form for all types of hospital expense insurance—was not considered feasible because the individual policy, being generally "tailor-made" for the insured family, requires more information of the hospital than a group policy. In addition, the prior acceptance of the HAP-4 form for the group side of the business made it eminently desirable to continue its use.

The "Group Hospital Insurance Form" consists of seven simply phrased questions on claim information which the hospital is asked to provide. The "Individual Hospital Insurance Form" has eleven questions. Both forms require authorization by the patient to release information, and for assignment of insurance benefits.

In its report the Council expressed satisfaction with the progress to date, declaring: "As the companies and hospitals join hands in support of this worth-while program, it will work better and better. The resulting simplification of hospital procedures should more than justify any current effort involved. And the ultimate beneficiary of these cooperative efforts, of course, is the hospitalized patient."

Copies of the report may be obtained without charge by writing to the Health Insurance Council, 60 John Street, New York 38, New York.

The Health Insurance Council—comprising eight insurance associations whose members account for 90 per cent of the health policies written by insurance companies—serves as a central source of information for members of the medical and hospital professions.

NATION'S FAMILY DOCTORS SUPPORT BELEAGUERED BRITISH COLLEAGUES

American family doctors have lined up solidly behind their colleagues across the sea. British

physicians, caught between spiraling costs and the Ministry of Health's refusal to grant a promised salary increase, are currently threatening to resign from the National Health Service.

Pointing out that the British medical care plan has failed miserably and put medicine on a mass production basis, the American Academy of General Practice urged British family doctors and specialists to resign from the NHS. The statement, issued at the Kansas City headquarters office, came from Dr. Floyd C. Bratt, Rochester, N. Y., chairman of the Academy's Commission on Public Policy.

In 1951, the NHS arbitrarily decided that all family doctors should earn the equivalent of \$6,200 a year. Since then, the cost of labor has risen 35 per cent and the doctors want a more modest 24 per cent increase. They have been offered a token 5 per cent.

Reports that British physicians are planning to strike are misleading, Dr. Bratt pointed out. The doctors do not plan to strike. Instead, they simply plan to resign from the NHS. This would mean a return to fee-for-service care. Instead of billing the government, doctors would bill each patient.

Dr. Bratt added that British physicians would not have been caught in the socialized medicine trap if they had built a strong medical care system based on general practice.

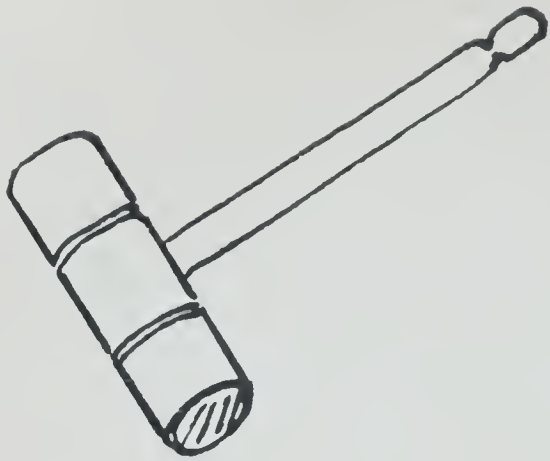
"Physicians and patients in this country should remember that a person requiring medical care can't be put on an endless belt and treated like a production line item. He needs individualized care and treatment. This is impossible when the doctor's waiting room is overflowing with people who don't really need a doctor and are only there because it's free," Dr. Bratt said.

"Under the British system, the doctor is supposedly free to decide how many patients he can treat. In practice, this is a myth. If the doctor doesn't push patients out the door, he can't earn enough to pay his expenses," he added.

Dr. Bratt pointed out that the British physician can't afford to spend more than six minutes with each patient. In this time, he is expected to examine the patient, make an accurate diagnosis, and discuss subsequent care and treatment.

"British doctors are now convinced that they can't trust the NHS. It makes promises and refuses to keep them. I am convinced that the NHS can be held responsible for the confusion that exists today. A more serious consequence has been lower medical care standards," Dr. Bratt said.

"We can be grateful that we can still select our own doctor and rely upon him to provide the finest medical care today available in any part of the world," Dr. Bratt concluded.



President's Page

In the early years of our life we were always exhorted by our parents, teachers, and elders to act and think as a gentleman. In the military service we were expected to be an officer and a gentleman at all times under any conditions. After our professional training our place in society, by virtue of our special training, has to do largely with one phase of human experience, namely, suffering and misfortune. In the evolution of the healing art, physicians have been many things: doctor, lawyer, preacher, and teacher.

In my first years of practice, after I had selected the community in which I wanted to live and the people I wanted to live with, I became interested and enthusiastic in all phases of activities in my community. Yet at no place in my training as a professional man was I told what place a professional man occupied in a community and what the word profession implied in the way of service and responsibility.

I had the good fortune of hearing Dr. Vannevar Bush deliver the Eleventh Martin Memorial Lecture at the annual meeting of the American College of Surgeons in San Francisco last October. Dr. Bush is one of the world's most eminent scientists and probably has as broad a concept of our universe and all its people as any other living man. He spoke of the physician in his relation to other fields of science. Certainly no other man has as much information in all fields of science as Dr. Bush, and I was much impressed by his definition of a profession and what responsibilities a professional man has in his daily life towards his community and all people. After listening to his address, I felt that if every young professional man had his concept of professional duties and responsibilities when he first started his professional life, how much better citizen he would be than we who have through many years of trial and error

learned by precept and example what the public expects of us.

We have reached that stage in the history of medicine where our interests must extend into the political and economic life of our country. This is a new venture and we have no landmarks to guide us; but the prestige of our present position in society can be lost if we do not enter these new fields of interest with vigor and determination. The school teacher, who has been responsible for the great progress in all phases of American life, did not take a strong position of influence when political philosophies were being developed, and today we see a great profession being treated with little respect. This must not happen to medicine. Dr. Bush has advocated more contact and better cooperation between all groups interested in any branch of science, as we are dependent on each other. It seems especially appropriate for us to have such an attitude, as we are similarly affected politically and economically.

Science has brought to the United States the best health and greatest prosperity known to any nation. If our profession is to play a part in the destiny of our country, it behooves us to be alert and aggressive in thinking and acting.

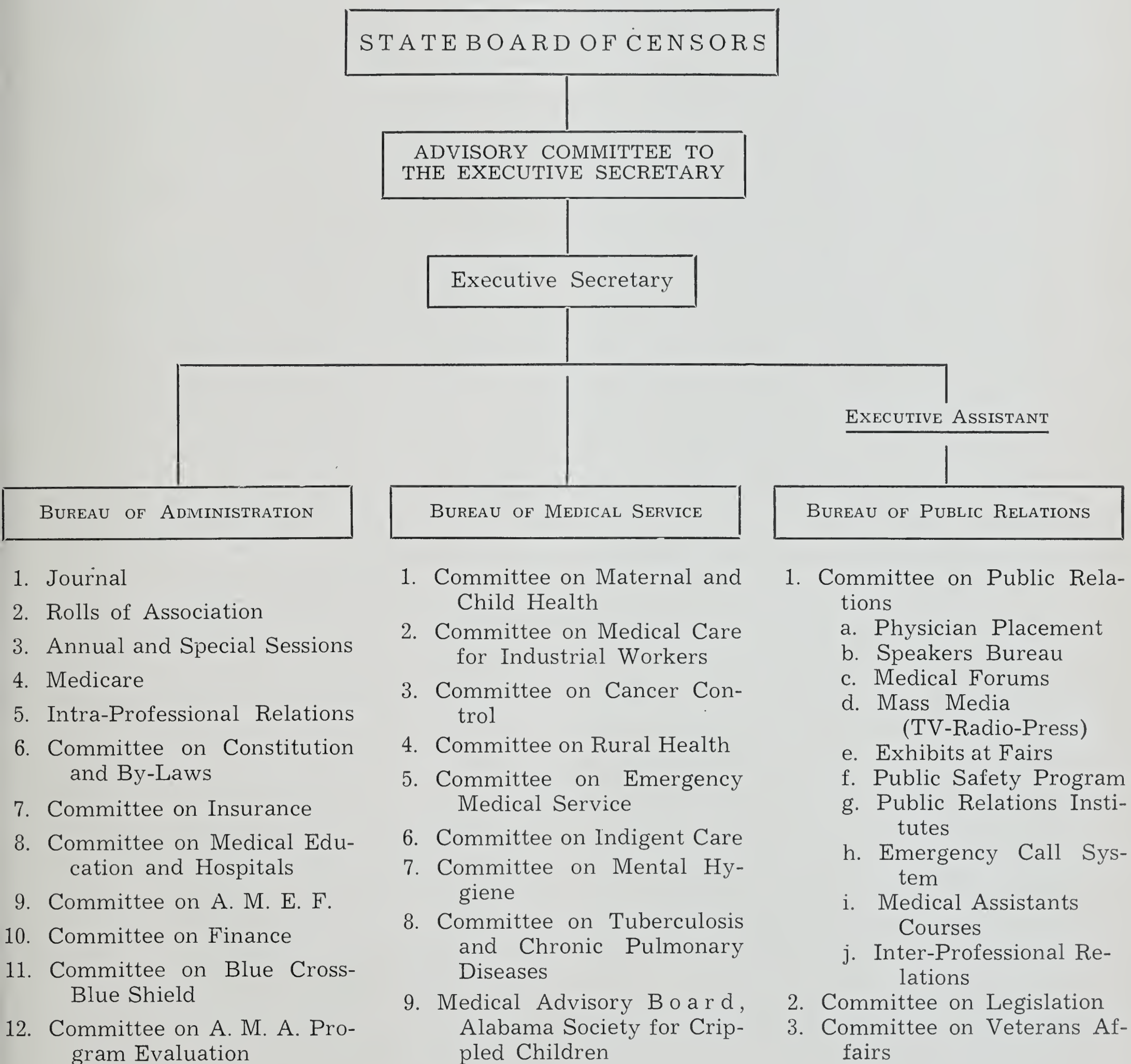
Through the courtesy of Dr. Vannevar Bush and the American College of Surgeons, Dr. Bush's lecture is published in the forum section of this issue of the *Journal*.

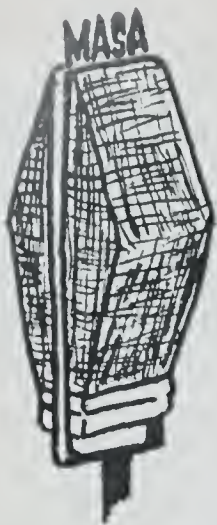


ORGANIZATION SECTION

ORGANIZATION CHART

The organization of the Association under three bureaus has been approved. The chart printed below gives the basic information on how the work of the Association is organized. Each member of the Advisory Committee concerns himself primarily with the work of one bureau: Dr. J. P. Collier (Administration), Dr. J. W. Simpson (Medical Services), and Dr. J. O. Finney (Public Relations). The advisory committee member and the chairmen of the committees in that bureau compose a council for the bureau's work.





ASSOCIATION FORUM

PROFESSIONAL COLLABORATION

VANNEVAR BUSH, Sc. D.

Cambridge, Mass.

It is my purpose to examine with you some of the responsibilities and opportunities of the professions, particularly those of medical men and scientists in these days of great hazard and promise.

A fascinating future surely lies before us, provided we can escape certain perils, and the most heartening potentialities lie in the field of medicine, and in the sciences adjacent to it. The time is coming when the practice of medicine will rest securely upon a firm scientific foundation, upon a systematic understanding of the life processes in all of their complexity, and no longer upon the insecure and shifting basis which partially supports it today, with clear understanding in part, but with a great mass of uncoordinated empirical data necessarily as the main reliance. The full integration may not come in our lifetime; indeed, in the light of the enormous complexity of living organisms, its consummation may require more than the mere compilation of experimental facts and the orderly marshalling of them under working hypotheses, the method which has been successful in the far less arduous task of interpreting the mechanical aspects of the nature of the physical world. There may be required new methods of thought, novel ways of recording and transmitting the accumulated experience of the race, ways as yet unconceived of bringing to bear on complex problems the interrelated efforts of diverse minds. We may witness new devices as powerful, versatile, and rapid as are digital computers in the realm of computation and analysis, but capable of interrelating and ordering masses of primary and inexact observations into meaningful arrays. There may be means for communicating the knowledge of a group which will render obsolete the cumbersome writing of papers and the chaotic task of storing and consulting them. Certainly we will see the day, perhaps we should have already, when the public lecture is fully obsolete.

The Eleventh Martin Memorial Lecture, presented at the annual meeting of the American College of Surgeons, San Francisco, October 8, 1956.

The marks of progress are all about us. The biological sciences are moving forward on a broad front and at an accelerated pace. In the next decade the flood of accumulated basic knowledge may produce applications of startling moment, much as the accumulated fundamental knowledge in physics recently led to an understanding and manipulation of the atom, the transmutation of elements, and controllable atomic energy.

Genetics some ten years ago turned from the higher organisms to more elementary ones, expecting to find there simplicity in the beginnings of genetic systems, and found instead an amazing early complexity. But, with the more plastic material, experimentation has proceeded at a breath-taking pace. Chromatography, the use of tracer elements, microchemical processes, are sorting out many an old puzzle in biochemistry. The involved system by which bacteria synthesize the amino acids is falling into line, and some day we will understand more of how these building blocks are assembled into proteins. The amazing skill of organic chemists not only produces for us duplicates of vitamins, or hormones, but also derivatives and analogues of these, and we understand the first chapter of how an antibiotic may operate, or why a vitamin is essential as the building block for an enzyme. The chemistry of muscle action is not nearly so mysterious as it was; at least we know something of the source of energy, and the process by which chemical bonding and shortening are interrelated. In photosynthesis it appears that we are, at last, on the verge of producing the essential chemical action in vitro, with chlorophyll and its associated protein isolated intact for our study. We could readily extend the list of recent accomplishments. But there is vastly more to be done. We are, for instance, very far from understanding why one substance, with a molecular weight in the millions, may be beneficial, while another, differing only slightly, may interrupt essential life processes. The world is still full of mystery, and it will be long before we understand much, even when we limit ourselves to the mere mechanism of life and do not approach that greatest mystery of all: that you and I, as conscious beings, are capable of pondering it all.

As we view how far we have come, and glimpse the great vistas before us, we know that this is an exciting time in which to live, and that stirring adventure beckons. There is accomplishment to be made which will render life more pleasant and we hope more fruitful, that will lift the burdens which man's shoulders have borne since he first dominated the earth, and banish the pain and harassment that have always been his lot. For we now know that, given time and wisdom, the ills of man may be conquered, even those ills of his mind which have forever dragged him down. All this can be done if we escape our perils, and continue on the bright path we have recently trod. And what are these perils?

First is the threat of war, appalling war that would be fast and terrible, in which H bombs would destroy cities at a blow, in which hundreds of millions would be killed and maimed in an insane fury which would leave the whole world, belligerent and neutral alike, a devastated desert. This is not the only peril. The Communist manifesto which declares, "They openly declare that their ends can be attained only by the forcible overthrow of all existing social conditions," is still the charter of a powerful oligarchy which holds great nations in thrall. Political murder, enslavement, conspiracy against neighbors, did not end when Stalin became vilified. The advancing tide of Russian domination, engulfing weak states by force or stealth, seems to have been momentarily halted, but it will again creep forward unless we are alert.

Nor is our democratic system safe without that eternal vigilance which is difficult to sustain in prosperous times. When all goes well, as it does today, citizens are prone to forget that a determined, informed public opinion is our only guarantee that the liberties won by our fathers will not be whittled away. We have the highest standard of living the world has ever seen. We have nearly full employment, and many benefits that ameliorate the lot of the unfortunate, safeguards against the cruelties of nature, and some against the evil deeds of men. But can we hold on this high plateau, continue to provide liberally for those in distress, and particularly can we continue our insatiable national appetite for luxury, without forcing ourselves again into inflation?

Whether we escape the perils, and continue on the bright path to a happier life, depends upon whether we, as a people, think wisely and well. Not the acts of legislatures, not the pronouncements of courts, determine our future; these are transitory and can change. The great swelling voice of the mass opinion of the citizens of this republic, incoherent and discordant, erratic and superficial as it sometimes is, rising to heights of sound judgment at rare intervals, maps out the

road which all public servants ultimately follow. And this public opinion is formed not by the radio and the press, or even by those who control these media. It is formed by that minute fraction of the population which thinks and speaks, by that small but powerful minority, disagreeing on every issue, arguing and ridiculing, which looks beyond the diversion of the moment, and influences because it labors to understand. The members of the minority are in every station of life, in business, in labor organizations, on the farm. They speak in every circle. The most significant group of those who think well is in the professions, for it is their prerogative, their duty, to think for their fellows within the limits of their diverse specialties, and they instinctively approach every question by attempting to understand it, for that is the way in which they gained admission¹ to their privileged status. On the professions, then, rests much of the burden of guiding this country of ours on its strange but hopeful way.

What is a profession? What are the characteristics by which it is distinguished from other groupings or types of organization? First and foremost its members are the possessors and custodians of a special field of knowledge, acquired by long assiduous study, and are respected and accorded privileges because of that fact. Second, it is a loose grouping of individuals, rather than a pyramidal organization. In nature we find two types of organization, the integrated society, exemplified by the ant, and the associative society, illustrated by the flock of birds in migration. Both forms have been successful in evolution throughout the wide range over which organisms combine. Both forms are found among human institutions. The profession, most decidedly, belongs in the second category. This is not negated by the fact that many professional men are members of other types of organization, and, for example, derive their income in the form of salary rather than of fees, although the true status of some professions is threatened a bit by the trend in this direction. Whether a man can be an employee, and at the same time a truly professional man, depends upon whether he can maintain his individuality and his relative independence, and many can. The true profession, however, is a voluntary banding together of independent members, deriving none of their sustenance from the association, utterly uncontrolled in their thoughts and actions so long as they remain within the law, and within the code of the association itself. Third, every profession has, to some degree, a symbolism and a ritual of its own. There is not so much of this in recent times, for many procedures which were once impressive are so no longer, because we have become more mature perhaps, or at least more skeptical. Fourth, there is often, especially in the older pro-

fessions, a means for maintaining standards and for disciplining those who violate a code, usually backed up by the civil law. Something of the sort is essential, for every profession is surrounded by charlatans, and, human nature being what it is, special privileges are bound to be abused. Of course these controls have been used at times to limit the professional privilege to the elect, and hold down the numbers of those who enjoy the franchise, but this is certainly not a prominent feature today. On the other hand the formalism and rigidity of control does seriously hinder the man who would enter the profession by an unconventional path, no matter how intelligent and devoted he may be, and it tends also toward an undesirable uniformity and standardization.

But the primary characteristic of a profession has not yet been mentioned. Without it no group, no matter how scholarly it may be, no association no matter what the titles of its members, no assembly of striking individuals no matter what may be the depth of their culture, is truly entitled to the proud name of profession. From the earliest times this primary characteristic has been the hallmark of professional men when such men have lived up to their high ideals. The members of a profession minister to the people. The word connotes more than service. To minister implies no servility, no apology, no inferiority. On the contrary, members of a profession minister with dignity, they demand the respect due to their skill and devotion, they do not merely advise, they insist upon being heard, they do not submit their opinions for the judgment of the layman who is their client, no matter how powerful he may be, they insist that they have his confidence, that, in their special field, their opinion shall control, or that he turn elsewhere. They recognize that he may need to join their findings with factors outside their special field in coming to decisions. They refrain, if they be wise, from any appearance of speaking with authority except in the area of their own competence. But within their proper scope, modest men though they may be, they advise and guide with pride, and with the insistence that the ancient art which they represent be received with the respect which is its due. And, when they minister to the weak and humble, they do so with kindness, bringing to the unfortunate, whether their ills be spiritual or physical, whether their misfortune results from the rigors of nature or the cruelty of man, that most heartening of support, a strong and able ally and friend on whom to lean. All this it means to minister. So long as members of our professions live up to their birth-right this will be the shibboleth which strengthens the bond among them.

There is a corollary characteristic. The true members of a profession detach themselves from

the mad scramble after this world's goods. This does not mean, as it once so often did, that they abjure the fine things of life and retire into a monastery. In order to function with full effectiveness a professional man needs a competence, that he may live in reasonable and proper manner, as befits his station and his mission. But when a man in the professions makes riches his primary goal, he ceases to belong to the profession in a true sense. The greatest exemplification of this corollary characteristic lies among the humble members of religious groups, the devoted parish priest, the preacher whose flock, with their sorely troubled minds, are his primary concern, and to whom wealth, or even a proper income, have no meaning in the light of his devotion. But this lecture is concerned principally with other professions, for religion stands by itself and should not be subjected to the analysis which applies elsewhere. And there are plenty of examples in other fields. The teacher, and there are many, who cannot be lured by any salary attraction to less satisfying fields from the joy he finds in aiding the development of young minds, is all about us, and in fact we would be in a sorry plight without him. The lawyer who takes special satisfaction in protecting the indigent and the misunderstood, sometimes at the peril of his reputation, is known to all of us. The able and devoted country physician on his weary rounds needs no emphasis on his character to this audience.

We speak of the privileges of the professions, and it is well to examine their basis and practice briefly. There are first the legal privileges, set up to protect the public against charlatans and salesmen of false service, and very necessary for the purpose: admission to the bar, the registration of engineers that deal directly with the public, the license to practice. Systems, tests, certification are essential wherever choice of advisers is directly exercised by individuals, and we certainly, in this country, do not wish to replace this free choice by some form of bureaucratic assignment. In general, our procedures for public protection work well, even though they are occasionally viewed as a means for protecting the members of the profession themselves, rather than the people they serve.

Let me, in all frankness, speak of this for a moment. Every profession, in order to function in a modern environment, is surrounded and supported by auxiliary groups, the technicians and semi-professional groups who are the hewers of wood and drawers of water, but whose performance is nevertheless fully important to sound overall results. These groups are not always treated with generosity and wisdom by the professions they serve. I might choose my examples from various fields, from the teaching profession where arbi-

trary linking of promotion and academic degrees is often carried to absurd extremes, from research laboratories where the skilled instrument maker who makes a result possible is given a curt nod rather than the recognition he has earned. Artificial barriers are foreign to our democratic philosophy and they are gradually disappearing. Even in the military profession an enlisted man occasionally becomes a general, and such examples, while rare, accomplish much in the improvement of morale throughout the organization.

It seems to me, as I view it from a distance, that the medical profession has much yet to learn before it is fully in step with the trend in this regard. Is the skilled technician, who makes himself master of an intricate procedure, who is scholarly and wise, who can perhaps manipulate tagged iodine for the thyroid better than the one who originally conceived the method, nevertheless doomed to remain permanently in an inferior status merely because his path to understanding was unconventional? Is the nurse, of superior judgment and devotion, accorded the full professional recognition that her calibre warrants? I know an accomplished archaeologist, an eminent astronomer, a number of outstanding engineers, who never took a degree in course, but I do not know an eminent medical man who rose through a fully unconventional route. Ah, one says, but the system for protecting the public needs to be far more effective in the medical field than elsewhere. I agree. But it does not need to be rigid and arbitrary in order to be effective; in fact the two seldom go together. I suppose we always need somewhat more positive limitations on designation of those who are entitled to prescribe or operate directly for fees. But I do wish there were carefully guarded side entrances to the chosen circle, as well as the well marked front door. And, more to the point, I wish the profession had more adroit ways of admitting to full acceptance, as special colleagues, those who excel in serving it well. I wish, also, that I could detect a trend toward passing on to auxiliary groups as much as possible of responsibility and of elevating activity. For the medical system is not one group, but a number of interrelated ones, and its health is dependent upon the morale throughout them. The greatest privilege which a profession enjoys is not the prerogative conferred by law, but the respect accorded its members by a grateful public, and when a profession becomes intricately organized in the modern sense, it is essential that this unique privilege be shared throughout the groups involved, to foster the pride and loyalty which alone can maintain the discipline and smooth interrelation needed for satisfactory performance. It is also essential, it seems to me, that there be no rigid caste system, based on birth or youthful path of education, and ab-

solutely controlling of individual status until death, but a more fluid situation in which there are no barriers that cannot be surmounted by intelligence and hard work.

What of the responsibilities of the professions, which accompany the privilege? We have already considered the primary responsibility, to serve well, to minister to the public with dignity and skill, in the fields which are their several domains. To this we have added another responsibility, secondary to the first, but of equal significance, the responsibility to lead their fellows in their consideration of public questions, and in the intricacies of their daily lives. Upon the wisdom of those who thus lead, wherever they may be placed, whatever the competence which causes their associates to turn to them when puzzled, depends the safety of this country in a hazardous and promising world. There is a duty inherent upon those who can talk well to do so, and to make their thoughts known, to differ widely upon every question, with faith in an informed public opinion to resolve differences reasonably. For the professional man this often presents a quandary; it is sometimes difficult for him to speak without his hearers' being given the impression that he regards his eminence in one field as conferring upon him a special status in all fields. In fact we see, occasionally, the man of the physical sciences who speaks *ex cathedra* on politics or economics, and who thus debases the currency of those who would express honest opinions as laymen in problems where every citizen is entitled to participate and none are entitled to arbitrary judgment. But our complex modern affairs need more of analysis by thoughtful men, and wide disagreement of opinion on public questions, outside of the professional field, is not inconsistent with the presentation of reassuring unanimity on well accepted doctrine within it.

There is another responsibility of any profession, and this brings us back to our original theme. This is to enhance and extend the knowledge and understanding on which the professional practice of the profession is based. In the case of medicine this means the profound task of understanding life, its origins, its chemical and physical processes, its manifestations in man in his whole range of mental and physical ills and health.

The subject is too vast for any one individual or any one group; the skills and instrumentation from diverse fields are essential for progress. And all this calls for more and more effective collaboration between the medical profession and the scientific profession, especially that part of the scientific profession whose subject matter is adjacent to medicine. I feel that such collaboration is today lacking or faulty in too many instances, and I am anxious to determine, if I can, the rea-

sons for this situation.

There are areas where good collaboration occurs of course. In industry, in the pharmaceutical field in particular, I have the impression that medical men and scientists understand one another pretty well, and work together reasonably effectively for common ends. Then too one can point to isolated cases where there is effective attack on problems by joint effort, because two individuals happen to speak the same language and supplement one another's skills smoothly. But there is not enough of it. I cannot think of many cases in which a physicist, for example, of top calibre, and a medical man of equal status, have jointly attained an important result which would have been inaccessible to either alone, and where the collaboration has been on a basis of full equality and understanding. And I believe this is because there are certain artificial barriers present which could readily be broken down.

Let me examine a somewhat parallel situation. At the beginning of World War II there was almost complete lack of collaboration between scientists and military men. True, there were governmental laboratories where both types were present, but usually there was a gulf between them. True also there were scientists and engineers in industry who worked closely with military men, but the relationship here was often that of purchasing agent and salesman, rather than professional. There was generally a complete lack of understanding, and an aura of myth and prejudice.

Military men thought of scientists as long-haired visionaries, with no comprehension of the tough practicalities of life in general, and certainly not of war. They felt, and here they were right, that few scientists had the slightest conception of what is involved in military leadership, of the rugged indoctrination which enables a good officer to hold terrified men together, striving toward a common goal, in the face of disaster, horror, wounds, and sudden death. They felt, and here they were wrong, that scientists were generally *prima donnas* and softies, who could not take it. Moreover they felt sure that the art of war had matured, that technical change could come only gradually and in detail, and hence that scientists had nothing real to contribute, and moreover that they spoke a language which no normal human being could possibly comprehend, or would wish to.

Of course there were exceptions. There were Army and Navy officers who were excellent engineers, and who had, as every really competent engineer must have, an understanding of the trends in the sciences upon which engineering progress is based. But the main body of opinion was the other way. Early in the war a major general, whom I will be careful not to identify, but who headed a very important branch of the serv-

ice, told me in no uncertain terms that research on weapons during a war was absurd, for no weapon developed during a war ever came into use before its termination. And an admiral asserted forcibly, and in writing for that matter, that the Navy had the submarine situation entirely under control, and wished no suggestion from those who could not possibly comprehend its problems. Officers were generally polite, but courtesy usually connoted a feeling on their part that there was nothing to be gained by any less formal relationship.

And scientists, only too generally, thought of military men as dodos, who insisted on fighting every war with the weapons of the previous one, who resisted and resented innovations which would cause them to alter the ingrained habits and conceptions of a lifetime. Unfortunately there was often something of truth in the concept. They regarded military men as caste conscious, with a tightly knit set of social conventions. They also felt that one could not collaborate with a military man, that all one could do would be to lay naked before him the fruit of his labors, for him to judge, without explanation and without appeal, from his unique position as the only professional man who understood war.

The relationship between medical men in uniform and out was, of course, markedly different. For many medical officers were professional medical men first and foremost, and many medical men in civilian life understood fully the problems of medicine in the services. But I have been considering the relationship on new weapons rather than on military medicine, and on this there was a yawning chasm and an almost complete lack of collaboration of any sort.

Yet, before the end of the conflict, the whole art of war had been completely transformed, because of the advent of spectacular new weapons: guided missiles, proximity fuses, radar, target seeking torpedoes, recoilless guns, rockets, appallingly effective gases which fortunately did not come into use, and the A bomb. Moreover there had developed a genuine partnership between military men on the one hand, and scientists and engineers on the other. Mutual understanding and respect appeared. Close friendships developed. Many officers acquired a remarkable understanding of new technical developments. Many civilians became adept in the subtle aspects of the art of war. There was teamwork of the highest order, and out of it evolved a new concept of national conflict. The course of joint development has proceeded since the war, somewhat haltingly at times, but with continuing momentum, until it has now resulted in a situation which is entirely new in the world, and in which all great war is absurd and obsolete, an unmitigated disease which must be

avoided by all means for it would be fatal to civilization, rather than the last resort of diplomacy, to be indulged in when the risks appear justified.

Why was there this extraordinary transformation in the relations between two professional groups? Primarily because there was a war on, and men suppressed their prejudices and their preferences in the general national fervor, and in the determination to serve well in a time of common peril. But the two groups, thus forcibly brought together, discovered that many of their prejudices and judgments were based on myth. And each group found, in the other, unsuspected qualities of character which they could wholeheartedly admire. The transformation occurred here, and in a parallel manner in Britain, because these were democracies, where gulfs of caste or pride were readily bridged. It did not occur in the Germany of Hitler, or the Japan of military domination, for the highest type of partnership is impossible in the atmosphere of totalitarianism. And that is one very cogent reason why Germany and Japan lost the war.

Now I am not going to present a detailed analogy between this relationship I have reviewed, and the present relationship between medical men and scientists. Some of the aspects have their parallels, which you can readily recognize, and some most decidedly do not. But I do wish to point out one or two factors in the present situation to which we may direct attention, I believe to advantage, even although in so doing I may move close to the edge of that unforgivable social sin of criticizing one's host. For I do not believe we are going to make much progress in bringing the professions closer together unless we examine frankly some of the structural features of the barrier which separates them.

I dismiss at once the allegation that surgeons are too high hat to work with, that traces of compensation remain from the days when they were joined with the barbers, and shunned by gentlemen. Some of the same allegations are made regarding engineers, of whom I am one, for the engineer deals with costs and the minds of true scientists are above such mundane matters. I dismiss these allegations as false at the outset so that they will not cloud our analysis. I know I am right regarding surgeons, for I have worked with many of them, and while I have found the same distribution of idiosyncrasies as occurs in the general population, I have yet to find one wearing a tall hat.

Medical men, generally, feel that scientists do not understand the motivations, tensions, inner emotions of a medical career, and they are generally right. Scientists have never walked the wards. There is a vast difference between deciding upon the contents of a syringe, upon which may hang

the life of an accomplished and valuable patient, and deciding upon the contents of a test tube, upon which no more depends than the fate of a pet theory. There is a harrowing difference between looking at the position of a needle on a dial, and looking into the eyes of a dying child. There is an essential distinction between the care of a patient and the treatment of a disease. Certainly few scientists have grasped the full import of these differences. But they can learn.

Medical men, generally, feel that scientists do not understand that the practice of medicine is, and must long remain, essentially an art, to which science can sometimes contribute, but which it can by no means at present supplant. They feel that scientists insist on proceeding logically point by point, pinning down one concept completely before proceeding to the next, working slowly toward a distant goal with little thought of applications on the way, whereas medicine must continuously do the best it can with what it has at hand, even though its processes are often admittedly unscientific and even crude. They feel that scientists do not appreciate this need for art, that they are contemptuous of all that does not conform to their own standards of rigor, and that they would therefore place obstacles in the road toward empirical but necessary advance.

To turn to the other side for a moment, scientists generally feel that, when a medical man and a layman are joined in an endeavor, there will be no partnership in reality, but that the medical man will either dominate the combination or break it up. They feel that if the scientist tries to collaborate he will soon be reduced to the status of technician, and that, if results appear, they will inevitably become attributed to the member of the group who alone is privileged to deal directly with the essential ultimate subject matter, human life. They feel that the medical man is afraid to admit ignorance, even when justified, and that he tends to protect himself by overassertion. Now let me assert at once that in regard to this preconception, and the others that I have just treated for that matter, there are many exceptions, many in each profession who understand and appreciate the opposite profession fully. But I am dealing in generalities, and, in this sense, there is unfortunately a real basis for the feeling which I find among scientists rather generally. And it is not, after all, too surprising to find this true. The medical man, if he is worth his salt, and by reason of his training and experience, is prone to assert himself. If he enters a home where there is sudden critical illness, he must portray calm and confidence, however he may feel inwardly. If he enters upon a hazardous operation he must insist that every move in the operating room be centered about and responsive to his personal needs and decisions.

And this is the aspect of medical characteristics which the layman usually sees. He does not see the small conference between medical men on a tough case, where there is full discussion and give and take, where the opinion of the most junior member is treated with respect if he can support it ably, where there is no organization, and no one is boss, even although one man alone may be called upon to resolve the discussion and render the final decision. Still, and to be fully frank, I believe there is a bit of real basis for the feeling that, where a medical man is joined with other professions, he instinctively tends to take over. The essence of collaboration is the suppression of all instinct toward the establishment of a pecking order, in fact the enjoyment of any social grouping whatever depends intimately upon the complete absence thereof. In relations between professional men there is no such crude and elemental concept involved. But, since its presence or absence is so determining in our judgment of human relations, even the remote suggestion that a sublimed form may be present destroys the effectiveness of collaboration. For collaboration means the substitution of a group objective, voluntarily accepted, for the individual objectives of the members.

I could go on and try to examine a few more structural members in the barrier. But what do we do about it?

In the first place let us record that there are individual members of every profession who will never collaborate with anyone under any circumstances. Let them depart in peace; their day is nearly done. The time is over when a Leonardo da Vinci could comprehend all of known art and science. We are also past the day when men of genius could retire to a cubicle, exclude all, and emerge with an intellectual feat of scientific reasoning before which all would bow in humble admiration. Even in the remotest corners of extreme specialization, where isolated contributions springing full grown from a master mind are still possible, the most notable advances are made under conditions where mind works on mind, and where credit for primary initiation is sometimes hard to assign. The man of genius still is the most important element in the whole array, and upon his excellence most of progress depends. But, if he does not know how to collaborate, or is too selfish or timid to do so, we can safely forget him.

We cannot order collaboration. This is not a dictatorship. Moreover, while sometimes shotgun marriages turn out surprisingly well, shotgun collaboration is a contradiction in terms. And no amount of artificial organization, no joint institutes, or combined reviewing committees, or joint directors, will come within the squirting range of a syringe of getting at the heart of the matter.

I have only one prescription, and I can't write

even this one in Latin. The professions fail to understand one another sufficiently; let us attempt to bring them together. We do not have the impulse of war to force men into contact, and it will hence take long to produce a detectible improvement in relations by this means. Yet I see no other path.

Now I do not mean more joint professional meetings; not that! If they occur I would expect them to widen the gulf more completely. Nor do I have in mind lectures by a member of one profession for the edification of another. I am skeptical of the value of all lectures, including this one. I would hope that we might approach, much more nearly than any such artifices as those, the core of the dilemma. And that resides in the misconceptions which each profession has in regard to the other.

If I were speaking to a group of physicists, I would have a suggestion to make. I believe it would help a bit if medical men, those who do not already understand it, were given an exemplification of scientific research in action and at its best. I am far from advocating in this connection more popularization of science, or more interpretation of science in one field for those in neighboring fields, although such steps have merit. I wonder if one could reconstruct the meeting in 1939, at which the news of a crucial experiment and the ideas of Frisch and Meitner were communicated to a group of physicists, and from which meeting emerged the concept of atomic fission, to be confirmed by experiment in three laboratories within 48 hours. I fear it would be difficult to recapture the genuine atmosphere, the give and take between earnest men, the tentative hypothesis which collapsed on a sentence, the subtle grasping of relationships which were hardly expressed, the symbolism which crammed into a yard of blackboard the concentrated essence of a generation of mathematics, the mounting tension as revolutionary concepts became clearly formulated and accepted. Something of the sort might be done, and I believe there is many a medical man who, if he participated thoroughly in such an affair, even on a much less ambitious plane, would learn something worth while about how the scientific mind really operates, and what is the method of scientific collaboration at its best.

I suggest, also, that it would help to join a scientist occasionally in your serious responsible discussion of a case, typical or otherwise, of kidney malfunction, or metabolic disorder, or whatever, along with the physician in charge and the staff members. At times the fresh approach, unhampered by tradition and in spite of ignorance, will come up with a clarifying comment under such circumstances. And, in the process, the scientist will grasp more fully the central importance of

art in what you do, and the contributive nature of science. He will appreciate the fundamental difference between the analysis of a disease, and the forced explicit treatment of a specific case.

Thus there can be a closer approach by each group to the mental processes of the other. But I would go further than this, even though you feel that I may be naive in my approach to a very subtle problem. Men do not learn to understand one another merely by sharing intellectual experiences. They must meet on an emotional level if the foundation is to be built for collaboration on a high plane.

Scientists do not understand the true life of a medical man. With notable exceptions this is certainly true. Yet all good scientists learn with facility, or else are simply scientists emeriti. Give them a taste of the medical life in its starkest rigor. I remember keenly one of my boyhood experiences, when I accompanied a country doctor through a poverty stricken hospital. I remember also a conversation with a great friend and an eminent banker whose maid had been injured by an automobile, and who had just seen the midnight scene in an emergency room for the first time, and whose admiration for the young internes was a joy to witness. I remember also being conducted through a ward, suitably attired so as not to embarrass the patients, with a young surgeon, and watching the devotion in the eyes of a humble woman for whom he had built a new face. Pick a few outstanding and human scientists and give them such experience, and they will grasp a part of the world of man's experience which they have never known. I do not mean witnessing an operation, where the interest is mainly technical. I mean an introduction to that inner sanctum, where the true heart of medicine throbs strongly, that sanctum which is securely guarded against the cynicism of selfish men, and against the ribald comments of those to whom nothing is sacred. Indoctrinate well and test, communicate the password, and guide. From true scientists the response, while silent, will be all that you hope.

Now, what about this queer notion on the part of scientists, that medical men tend to try to dominate any small group brought together for collaboration. Here I do not know enough about the medical profession to prescribe, although I know quite a lot about some medical men. The ones I have become well acquainted with are entirely free of the fault. Perhaps there is no basis for the rumor. So I will have to leave the treatment of this ill, if indeed the symptoms are real and have not been misinterpreted, to you. It may call for properly proportioned psychiatric treatment; I'm sure it is no case for surgery. It may be that it merely needs to be given a name, and relegated to the category of rare diseases, for which there is no

cure, but which are not of great social moment. You will know. I merely mention that I have heard the allegation and leave the rest in your hands.

There are other ways, worth while no doubt, in which the professions may be brought to a better understanding of one another. It is not necessary that they be brought to a full understanding of one another's subject matter; that would be impossible. For, if they grasp one another's mores and traditions, methods of thought, deep convictions, motivations, there will be no further need to stimulate collaboration of the highest sort. It will occur automatically. And from it will result a surge forward, on that complex task of understanding life, where the skill of all professional groups will be strained to the utmost, a new accomplishment which will place a firmer foundation under the keystone of that honorable profession to which you belong, ministry to the people. May that ministry always be conducted with pride and dignity. And may the gratitude of humble men always remain your primary compensation and reward.

Introducing—



Mr. William V. Wallace joined the state office staff on June 1 as Executive Assistant. His first duties will be in the field of public relations, although he will assist in all phases of the Association's work.

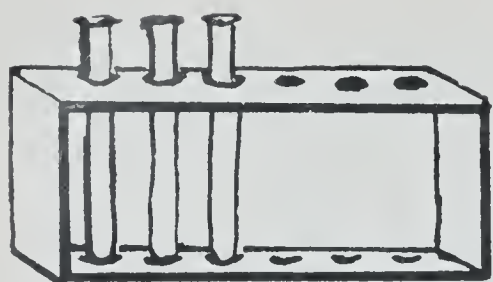
Mr. Wallace received his education at the University of Alabama where he majored in journalism. He and his wife, Sherry, and their infant daughter have recently moved from Decatur to make their home in Montgomery.

Sputum Test Helps Find Lung Cancer—The laboratory examination of sputum frequently can give an early indication of lung cancer, according to two Albany, N. Y., doctors.

While the test cannot always establish a definite diagnosis, it can indicate the need for further study with other more specialized techniques, Drs. Doris S. Rome and Kenneth B. Olson of Albany Medical College said in the May 11 Journal of the American Medical Association.

They pointed out that cough and expectoration are common in adults as a result of chronic irritation due to smoking, chronic bronchitis, or acute pulmonary infection.

Such persons should have their sputum examined for cancer cells in an effort to make an earlier diagnosis of lung cancer—if it is present—and thereby begin treatment sooner, the doctors said.



STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.

State Health Officer

PREVENTING BLINDNESS FROM GLAUCOMA

Have you ever wandered around in a photography shop, or looked in its show windows? If so, you undoubtedly noticed the large variety of cameras, the large ones, the small ones, others with various attachments, "still" cameras and yet another kind—movie cameras which take many pictures a second, and record sound at the same time perhaps.

Many shops have still another type of camera—one which "develops" a print in a matter of minutes after the picture is taken. And many people have been amazed at this mechanical wonder, without realizing that man possesses a natural camera far superior to this manmade one.

The human eye is in reality a type of camera, and no comparable product of this or any other century can equal its speed and accuracy and faithfulness. Hardly a waking minute passes that the human eye does not "take" and pass on to the brain for "development" many, many pictures. And more, there is still another area in which the human camera is as yet unmatched. The movie and other types of cameras are limited to taking the pictures in front of the lenses. On the other hand, man's brain, or the human camera's "development center," with the help of the eye and other organs, is capable of imagination, of the creation of "mental pictures" which have yet to take physical shape and form.

Perhaps you have never thought of your eyes and the sight they provide in this way; and it is likely you have not realized that an estimated 83 per cent of all a person learns, or the knowledge he accumulates, in his lifetime is made possible by these vital organs. Moreover, sight accounts for a large amount of another aspect of behavior. Approximately 80 per cent of man's actions, again throughout life, are said to be controlled through his eyesight.

Is it any wonder, then, that the preservation of our all-important eyes is worth a great price? Or said another way, is any price too great to pay to save, to conserve it?

Various answers to these essential questions are heard in our nation. A vigorous "no" is heard

from many quarters, from official health and school agencies, from voluntary groups and associations and from individuals. In Alabama, this list includes the State Health Department and the county health departments. For the country as a whole, the National Society for the Prevention of Blindness is one nonprofit corporation which is in the forefront of conservation efforts.

But are the present efforts enough? Maybe you would like to judge for yourself after hearing these facts. Less than \$500,000 a year is spent in the nation for organized activity designed to prevent blindness. Moreover, less than one million dollars a year is spent on research in eye diseases. In other words, less than one-and-a-half million dollars a year is spent for this purpose. And yet, more than five times this amount, or an estimated eight million dollars, is spent every year on eye cosmetics and lotions!

Sadly, many of us appear to take our wonderful eyes for granted while they are working well. But ask someone who has lost the sight in one or both eyes whether this is a smart thing to do. The answer you will receive is a foregone conclusion. The "no" reply may be touched with more than a little bitterness and regret.

Let's see how conservation of sight can work out where one particular eye disease is concerned. The name of this illness—glaucoma—may be strange and unfamiliar to many people, despite the fact that it was first recognized by Hippocrates, the Greek physician, almost 25 centuries ago!

Perhaps the very unfamiliarity with the name glaucoma is one measure of the need for more intensive conservation efforts. For it is estimated that 800,000 men and women over 40 in the United States are slowly being blinded by this disease. Furthermore, the real tragedy is they do not know it, that many of them do not even guess anything is the slightest bit out of the ordinary where their eyes are concerned. The chances are that many of these victims have never heard the name of the malady that slowly but surely is robbing them of their sight.

But does glaucoma, which is responsible for at least 12 per cent of all blindness, have to take such a heavy toll? Fortunately, the answer to that question is "no." Medical science has at its command the knowledge necessary to halt the progress of this disease.

However, this knowledge must be put to work early, for, if treatment is delayed, sight may be lost that can never be regained. In other words, medicine already has some all-important information—the knowledge to prevent blindness from glaucoma. Again, the big “IF” is stressed—if the disease is found and treated early—for doctors at present do not know a single way to restore sight that has been lost because of glaucoma.

Perhaps you would like to know the meaning of the word glaucoma. Arthur Knapp, the author of an article which appeared several years ago in *Hygeia*, published by the American Medical Association, tells us that it comes from the Greek word meaning “sea-green.” The pupils of the person’s eyes which have been blinded through this disease take on a greenish color, it seems. Hence the name glaucoma.

While these facts may be interesting enough, there is more vital information that more of us need to know so that we can keep our sight from being taken away. What do we need to learn about glaucoma to recognize its first warning signs, if there are any? What should we know in order to seek early treatment? What general preventive measures should we take even in the absence of any symptoms?

A publication of the National Society for the Prevention of Blindness, devoted exclusively to glaucoma, gives us a good account of what happens in this disease:

“The eyeball is shaped much like a basketball. But instead of air, a thick, jelly-like fluid fills most of the eyeball to give it shape. During the first stages of glaucoma, the pressure of this fluid in the front of the eyeball mysteriously increases. Nobody knows just why the pressure rises, although there are many theories.

“The fluid in the rear of the eyeball—under the increased pressure from the front—pushes against the retina, which is located at the back of the eyeball. The job of the retina is to receive the light rays entering the eye, and send them on to the brain, where the rays are then recognized as images.

“Thus the nerve fibers which connect the retina to the brain are a major link in the process of seeing. It’s this link which glaucoma attacks.

“At first, the increased fluid pressures damages only those retinal nerve fibers which enable you to see on each side. As a result, side vision is gradually destroyed. . . . In the final stages of the disease, the pressure destroys the nerves which permit front or central vision, and all sight is gone.”

In other words, according to this publication, glaucoma literally “squeezes” the sight out of its victim’s eyes. The pressure that has been described

is said to have an effect similar to that in an automobile tire which is subjected to increased air pressure.

If your vision is good, you can stand at the corner of a busy intersection, and you can see cars and people in all four directions. However, a man with advanced glaucoma who might be standing on the same corner would be able to see in only one direction—straight ahead. And later on and without treatment, he may be blinded, unable to see in any direction.

What is the very best defense against this serious disease? No weapon compares with having an eye specialist examine your eyes at least once every two years, and there is a compelling reason for this periodic examination. That reason is the fact that glaucoma sometimes attacks, progresses and causes damage that cannot be repaired without even giving a warning signal that the individual would notice!

A newborn baby can be afflicted with a type of this disease—with congenital glaucoma. And persons beyond that age, especially past 30, are potential victims. However, glaucoma strikes more often among another group. Men and women age 40 and over are more likely to develop it than younger people. Thus, the good defense, the periodic eye examination, is particularly important for them.

Because glaucoma strikes persons in the older age brackets mostly, it is believed by many to be perhaps a part of the natural process of aging. Elizabeth Ogg, the author of the Public Affairs Pamphlet “Save Your Sight,” explains that as we grow older, the eyes, like the remainder of the body, tend to become less flexible and fatigue-proof.

What importance does this theory of glaucoma associated with aging have where conservation of sight from this disease is concerned? Perhaps a great deal, in many cases. There is a tendency to think of the ills that come with age as inevitable and incapable of being reversed. And there is, in turn, a byproduct of this thinking, also. If such ills are indeed inevitable and irreversible, then why not accept them as such and make the necessary adjustments? Or why bother going to the doctor on a useless errand?

And the answer to these and similar questions is, the trip you make to the eye specialist’s office when you suspect glaucoma may well turn out to be a most useful expedition: it may mean the saving of your sight for the remainder of your life. More and more, medical science is making progress against diseases, and we do not take for granted many illnesses that once were given up as hopeless. And it cannot be said too much that whatever is true of other diseases associated with ag-

ing, something can be done about glaucoma. It can be, that is, if it is treated early.

What, exactly, can the doctor do? First of all, in those desirable periodic checkups, he can use a device called a tonometer to measure the pressure in the eye. There is other special equipment, such as the one which allows him to see into the eye's interior. Thus, he can usually spot glaucoma when it first gets a start.

In treating the disease, the doctor's goal will be reduction of the pressure inside the eyeball. He may do this by an operation or through the use of drugs. In some cases, both methods are used. The glaucoma operation, if performed early in the disease, is considered a relatively safe one. Moreover, the individual needs to spend only a short time in the hospital. And drug treatment, when it is prescribed, usually must be continued regularly for the remainder of the patient's life. As that Public Affairs Pamphlet author we quoted earlier points out, the rules the glaucoma patient needs to follow may seem exacting. But when the alternative of blindness is considered, the same rules would appear to be a small price to pay.

Glaucoma may be one of two types: acute and chronic. As the name implies, the acute kind attacks quickly. The victim experiences cloudy vision, and there may or may not be severe pain in and around the eyes. The chronic type, in a sense, may be considered more dangerous. For its onset is insidious, sly. Slowly and painlessly, the disease progresses, and the individual may dismiss the vague symptoms that come and go. Some signs that chronic glaucoma may be present are inability to adjust the eyes to darkened rooms such as those at movie houses, loss of side vision or vision that is blurred or foggy.

Of course, it is well to remember that these symptoms may be temporary, or a minor eye disorder. At the same time, the disease may give no warning signs that are as noticeable as these.

Our discussion would not be complete without mention of the glaucoma quack. As with other diseases, the quacks—the nonmedical healers—make tragically false promises. The tragedy lies in the fact that some people believe the quack can fulfill these promises. Such people go to the quack, who cannot help them, and waste valuable time and money. The quack, for example, claims that a “swaying” exercise will “cure” glaucoma. But is that true? Certainly not. Only one eye condition, crossed eyes, is known to be helped by exercise.

Who should be concerned with preventing blindness from glaucoma? The prevention program should be everyone's business, if our efforts are to be adequate.

Journal Lists Limitations of Tolbutamide—The release of the new oral diabetic drug tolbutamide (Orinase) for prescription use imposes new responsibilities on the physician and patient, according to an editorial in the June 1 Journal of the American Medical Association.

The drug, which was available only for experimental purposes until recently, is not a substitute for insulin and can be used only in certain types of diabetic patients, the editorial said. Both insulin and tolbutamide help control the amount of sugar in the blood, which is excessive in diabetes mellitus.

Real and serious problems will arise if tolbutamide is dispensed without a prescription and if it is used in patients for whom it “obviously is not indicated,” the editorial said. It is most likely to help the diabetic who has a relatively mild case which developed after the age of 30.

It is especially important for the patient not to develop a careless attitude and for him to understand that the use of tolbutamide does not rule out dietary restrictions and other measures necessary to control the disease, the editorial said. Uncooperative patients should not be considered suitable for treatment with tolbutamide.

Much research has been done on tolbutamide; however, more remains, including learning what happens when the drug is administered for many years.

“In the meantime, physicians must warn their patients that this drug is not a true substitute for insulin but in carefully selected patients can be used instead of insulin to control the blood sugar level,” the editorial said.

“If the patients are not warned properly, if they do not cooperate, or if the prescribers of the drug do not understand its limitations, trouble will inevitably arise,” it said.

The editorial also listed some of the restrictions and precautions in the use of tolbutamide.

It cannot be used in patients with juvenile or growth-onset diabetes mellitus; unstable or “brittle” diabetes; a history of diabetic coma; maturity-onset diabetes complicated by severe ketosis, acidosis, coma, severe injury, gangrene, Raynaud's disease, or serious impairment of kidney or thyroid function; malfunctioning or disease of the liver, or diabetes adequately controlled by dietary restriction.

Any physician using tolbutamide should insist that during the initial test period the patient report to him daily and during the first month once weekly for examination. After the first month the patient should be seen at least once a month.

DEPARTMENT OF HEALTH

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director

SPECIMENS EXAMINED

February 1957

Examinations for diphtheria bacilli and Vincent's	119
Agglutination tests	663
Typhoid cultures (blood, feces and urine)	597
Brucella cultures	10
Examinations for malaria	42
Examinations for intestinal parasites	2,972
Darkfield examinations	1
Serologic tests for syphilis (blood and spinal fluid)	27,593
Examinations for gonococci	1,494
Examinations for tubercle bacilli	3,126
Examinations for Negri bodies (smears and animal inoculations)	265
Water examinations	1,783
Milk and dairy products examinations	5,646
Miscellaneous examinations	516
Total	44,827

✂ ✂ ✂

March 1957

Examinations for diphtheria bacilli and Vincent's	95
Agglutination tests	608
Typhoid cultures (blood, feces and urine)	482
Brucella cultures	7
Examinations for malaria	45
Examinations for intestinal parasites	3,413
Darkfield examinations	3
Serologic tests for syphilis (blood and spinal fluid)	24,519
Examinations for gonococci	1,443
Examinations for tubercle bacilli	3,353
Examinations for Negri bodies (smears and animal inoculations)	283
Water examinations	1,846
Milk and dairy products examinations	4,939
Miscellaneous examinations	509
Total	41,545

BUREAU OF PREVENTABLE DISEASES

W. H. Y. SMITH, M. D., Director

CURRENT MORBIDITY STATISTICS

1957

	Jan.	Feb.	E. E.* Feb.
Typhoid and paratyphoid	0	1	1
Undulant fever	0	0	1
Meningitis	12	12	17
Scarlet fever	444	452	52
Whooping cough	22	7	94
Diphtheria	6	2	15
Tetanus	2	0	2
Tuberculosis	124	169	189
Tularemia	0	3	1
Amebic dysentery	3	7	2
Malaria	0	0	0
Influenza	168	239	2051
Smallpox	0	0	0
Measles	685	1176	346
Poliomyelitis	4	1	4
Encephalitis	1	0	0
Chickenpox	119	158	350
Typhus fever	1	0	1
Mumps	133	148	194
Cancer	665	597	316
Pellagra	0	0	1
Pneumonia	168	167	364
Syphilis	108	74	221
Chancroid	2	5	6
Gonorrhea	297	293	335
Rabies—Human cases	0	0	0
Positive animal heads	31	32	0

✂ ✂ ✂

	Feb.	Mar.	E. E.* Mar.
Typhoid and paratyphoid	1	2	3
Undulant fever	0	0	2
Meningitis	12	24	15
Scarlet fever	452	649	41
Whooping cough	7	24	82
Diphtheria	2	9	14
Tetanus	0	2	2
Tuberculosis	169	186	204
Tularemia	3	4	1
Amebic dysentery	7	5	2
Malaria	0	0	1
Influenza	239	889	1545
Smallpox	0	0	0
Measles	1176	2143	477
Poliomyelitis	1	4	3
Encephalitis	0	1	1
Chickenpox	158	237	396
Typhus fever	0	0	1
Mumps	148	285	189
Cancer	597	1181	357
Pellagra	0	2	1
Pneumonia	167	289	335
Syphilis	74	90	280
Chancroid	5	7	9
Gonorrhea	293	211	365
Rabies—Human cases	0	0	0
Positive animal heads	32	34	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATISTICS
AND COMPARATIVE DATA, DECEMBER 1956

Live Births, Fetal Deaths, Infant Deaths, and Deaths by Cause	Number Registered During December 1956			Rates* (Annual Basis)		
	Total	White	Non- White	1956	1955	1954
Live births.....	7280	4490	2790	26.2	26.0	25.8
Deaths.....	2519	1537	982	9.1	9.4	9.0
Fetal deaths.....	153	68	85	20.6	23.7	20.4
Infant deaths— under one month.....	162	75	87	22.2	25.4	24.5
under one year.....	254	104	150	34.9	40.6	39.6
Causes of Death						
Tuberculosis, 001-019.....	28	8	20	10.1	7.6	14.3
Syphilis, 020-029.....	4	2	2	1.4	1.4	6.2
Dysentery, 045-048.....	1		1	0.4	0.4	0.4
Diphtheria, 055.....					2.2	1.1
Whooping cough, 056.....					1.1	0.4
Meningococcal infections, 057.....	1	1		0.4	0.4	0.4
Poliomyelitis, 080, 081.....	2	2		0.7	0.4	0.4
Measles, 085.....						0.4
Malignant neoplasms, 140-205.....	311	226	85	112.1	111.6	106.9
Diabetes mellitus, 260.....	32	18	14	11.5	13.1	13.2
Pellagra, 281.....	1		1	0.4	0.7	0.7
Vascular lesions of central nervous system, 330-334.....	339	203	136	122.2	122.5	102.5
Rheumatic fever, 400-402.....	8	5	3	2.9	0.7	2.9
Diseases of the heart, 410-443.....	812	548	264	292.8	298.3	278.5
Hypertension with heart dis- ease, 440-443.....	139	59	80	50.1	61.8	55.8
Diseases of the arteries, 450- 456.....	45	31	14	16.2	18.2	18.0
Influenza, 480-483.....	16	15	1	5.8	9.4	10.7
Pneumonia, all forms, 490-493.....	103	47	56	37.1	38.5	42.6
Bronchitis, 500-502.....	5	2	3	1.8	2.2	1.5
Appendicitis, 550-553.....	4	2	2	1.4	0.7	0.4
Intestinal obstruction and hernia, 560, 561, 570.....	9	4	5	3.2	2.5	5.9
Gastro-enteritis and colitis, under 2, 571.0, 764.....	13	1	12	4.7	6.9	2.6
Cirrhosis of liver, 581.....	22	17	5	7.9	5.1	5.5
Diseases of pregnancy and childbirth, 640-689.....	4	1	3	5.4	10.9	9.8
Congenital malformations, 750-759.....	39	30	9	5.4	4.5	5.4
Accidents, total, 800-962.....	174	105	69	62.7	67.2	56.9
Motor vehicle accidents, 810-835, 960.....	72	52	20	26.0	32.7	19.5
All other defined causes.....	428	220	208	154.3	167.5	159.5
Ill-defined and unknown causes, 780-793, 795.....	118	49	69	42.5	42.2	50.0

PROVISIONAL BIRTH AND DEATH STATISTICS
FOR 1956 AND COMPARATIVE DATA

Live Births, Fetal Deaths, Infant Deaths, and Deaths by Cause	Number Recorded			Rates		
	1956 Provisional	1955 Final	1950-1954 Average	1956 Provisional	1955 Final	1950-1954 Average
Live births.....	83224	81601	82647	25.4	25.2	26.3
Deaths.....	26896	26317	26770	8.2	8.1	8.5
Fetal deaths.....	1827	1819	2045	21.5	21.8	24.1
Infant deaths— under one month.....	1721	1822	1996	20.7	22.3	24.1
under one year.....	2578	2622	2922	31.0	32.1	35.4
Causes of Death						
Tuberculosis, 001-019.....	330	349	611	10.1	10.8	19.5
Syphilis, 020-029.....	61	72	123	1.9	2.2	3.9
Dysentery, 045-048.....	16	12	28	0.5	0.4	0.9
Diphtheria, 055.....	11	25	19	0.3	0.8	0.6
Whooping cough, 056.....	10	23	26	0.3	0.7	0.8
Meningococcal infections, 057.....	12	24	33	0.4	0.7	1.0
Poliomyelitis, 080, 081.....	9	20	29	0.3	0.6	0.9
Measles, 085.....	12	2	19	0.4	0.1	0.6
Malignant neoplasms, 140-205.....	3456	3344	2972	105.5	103.2	94.7
Diabetes mellitus, 260.....	351	289	317	10.7	8.9	10.1
Pellagra, 281.....	12	13	27	0.4	0.4	0.9
Vascular lesions of central nervous system, 330-334.....	3521	3428	3309	107.5	105.8	105.5
Rheumatic fever, 400-402.....	52	39	46	1.6	1.2	1.5
Diseases of the heart, 410-443.....	8864	8533	8156	270.7	263.4	260.0
Hypertension with heart dis- ease, 440-443.....	1736	1749	2077	53.0	54.0	66.2
Diseases of the arteries, 450- 456.....	551	525	418	16.8	16.2	13.3
Influenza, 480-483.....	127	180	281	3.9	5.6	9.0
Pneumonia, all forms, 490-493.....	834	742	972	25.5	22.9	31.0
Bronchitis, 500-502.....	52	36	45	1.6	1.1	1.4
Appendicitis, 550-553.....	40	30	50	1.2	0.9	1.6
Intestinal obstruction and hernia, 560, 561, 570.....	122	115	155	3.7	3.5	4.9
Gastro-enteritis and colitis, under 2, 571.0, 764.....	141	134	153	4.3	4.1	4.9
Cirrhosis of liver, 581.....	152	140	152	4.6	4.3	4.8
Diseases of pregnancy and childbirth, 640-689.....	66	92	131	7.8	11.0	15.5
Congenital malformations, 750-759.....	358	365	345	4.3	4.5	4.2
Accidents, total, 800-962.....	2026	1889	1893	61.9	58.3	60.3
Motor vehicle accidents, 810-835, 960.....	991	869	845	30.3	26.8	26.9
All other defined causes.....	4660	4908	5262	142.3	151.5	167.7
Ill-defined and unknown causes, 780-793, 795.....	1050	988	1198	32.1	30.5	38.2

*Rates: Birth and death—per 1,000 population; Infant deaths—per 1,000 live births; Fetal deaths—per 1,000

deliveries; Maternal deaths—per 10,000 deliveries; Deaths from specified causes—per 100,000 population.

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THE DOCTOR'S SPIRITUAL RESPONSIBILITY

A. CARL ADKINS, D. D.

Pastor, Dauphin Way Methodist Church

Mobile, Alabama

Needless to say, I am delighted with the honor to speak to you on the subject of "The Doctor's Spiritual Responsibility," for there is a kinship between your profession and mine that cannot be denied. For you see, the doctor and the clergyman, and sometimes both, are usually called upon whenever there is a crisis in the life of an individual or a family, and generally the symptoms clearly suggest that their problems involve factors which can best be treated through a cooperative effort between the minister and the doctor.

Any man familiar with the history of medicine is at once impressed with the tremendous part religion has played in it. Dr. Harold Murray has told us that our first doctors were magicians who knew how to predict the future by observing the stars, and that they encouraged cures by resorting to current superstitions. Anyone who reads the early days of magic medicine is aware that the roles of priest and physician were combined in one person. The first clinics were housed in temples, and the hands that offered the sacrifices also cleaned and bound the wounds. Yes, for many centuries only priests practised medicine.

The Judeo-Christian tradition maintained and reinforced the linkage of medicine and religion. As a matter of fact, it was not until the 12th Century that we find ecclesiastical canons that were adverse to preachers practising medicine. But even then, if the local doctor succumbed to a fishing trip and was not available, the preacher was permitted to practise.

I think it ought to be said here that since, during the Middle Ages, many of the schools of medicine were housed in monasteries, there were many talented doctors who were also devout priests. But as the days came and went, the priest confined his

duties to the care of the soul and the physician to the care of the body.

Then came the Renaissance-Reformation period, and with it the beginning of the period of "so-called scientific medicine." Now, most doctors are aware that throughout the ages Christianity, with its compassionate concern for healing, has been a patron and friend of all the healing arts. And the better doctor is aware that there is a large field for cooperation between the minister and the physician, for he knows that the majority of people believe in God—the God who made this world and who instituted moral laws which govern the behavior of mankind.

Yes, the gifted doctor today knows that his patient is a personality whose spiritual and emotional needs require attention even as his physical needs are being treated. And he knows the help a wise clergyman can give in effecting relief. Therefore, he sees to it that the clergyman begins his relationship with the patient as soon as possible.

Never before in history has there been such an obvious need for doctors and ministers to be working together to meet the needs of almost every patient. Yet, you and I know the relationship between the medical profession and the clergy is characterized by both consensus and conflict. Dr. Kelly Barnett has recently suggested that, "For the common good of medicine and theology, and above all for the welfare of the patient, we must strive to minimize the conflict and disagreement and maximize the consensus and cooperation." He continues by saying, "Although the differences between us are real and are not to be dismissed lightly, many of them would disappear if we kept open the lines of communication between us."

Now any minister knows that the average doctor welcomes him as an ally when he cooperates with him and does not work independently of him. And almost any doctor knows that the bedside

This paper, and the three that follow, constituted an indoctrination seminar held in connection with the annual meeting of the Association, Mobile, April 19, 1957.

manner of the average minister leaves much to be desired. Ninety nine times out of a hundred, his visit to the patient is "stone cold." He knows nothing of the nature of the patient's illness or mental state, and in many instances his visit does more harm than good.

Few doctors ever take the time or trouble to advise the minister, and as a result of this neglect the patient is caught in the middle. And yet, Dr. Russell L. Dicks, an expert in this field, says that "It is safe to estimate that some fifty to seventy five per cent of the work of doctors and preachers overlap." That is to say, a patient would be equally helped by either a doctor or a pastor, granted good nursing care. For both the doctor and the pastor are dealing with spiritual problems and both know that if they can avoid doing harm most of their patients will get well.

No minister worthy of the name would object to the doctor bringing him up to date and prescribing certain "Do's and Don'ts." And something like this is essential if the minister is to avoid doing harm. Today most hospitals, as a routine of admission, note the patient's church affiliation and immediately send notice to the clergyman telling him one of his parishioners is in the hospital. The doctor can be sure the visit will be made. He cannot be sure of the results, so anything the doctor can do at this point will be helpful.

The more quickly we face the fact that medicine and religion are unavoidably interrelated, the better off we will be.

In recent years a great deal has been written by doctors and theologians concerning our common task, and one would assume we would work together to meet the needs of our patients. Yet you and I know that such is not the case, and for the obvious reason that neither the minister nor the doctor has been taught this cooperation. One scholar observed recently that "both doctors and ministers come from school and begin the practice of their respective professions with no practical conception of the possibility of a doctor-minister team in helping the sick."

In the mind of many doctors the clergyman becomes useful only when the patient has died. In fact, this is the only time some doctors bother to call the preacher, and yet we all know there are many complex problems for which there are no neat and easy answers. For example, there is the knotty problem as to whether or not the patient is to be informed that he is in terminal illness, or that he has a fatal disease. You see, you doctors cannot agree among yourselves precisely what should be done in this case. However, the clergyman who knows the patient well can contribute helpful evidence in the making of this and other important decisions.

Then there are the great social and ethical problems that are groaning for the judgment of both professions to find the best possible answer, such as alcoholism, deviations of sexual behavior, contraception, sterilization, artificial insemination, euthanasia, and others.

To be perfectly frank with you gentlemen, the doctor will never discharge his spiritual responsibility adequately until he measures up himself spiritually. The qualified doctor has long since learned that things do not happen by chance, but by a definite law which governs the world.

Through the years most of our great doctors and scientists have been conscious of God and very humble in their own limited knowledge. Every day you as a doctor must depend upon faith as did Louis Pasteur, Albert Einstein, and others. Listen to Dr. Einstein: "The man who regards his own life and that of his fellow creatures as meaningless is not only unfortunate but is almost disqualified for life."

The wise doctor is aware that seventy five per cent of his patients are members of one of the branches of the Judeo-Christian religion. He knows his patient's faith is a most significant thing, an item that must be considered in the diagnosis and treatment of his disease. Therefore, the truly effective doctor is one who is skilled in his art and has a keen appreciation of the spiritual values of life. The doctor well understands the value of his patient having confidence in him as a doctor. If the patient believes in the doctor's spirituality, the cooperation the doctor seeks from the patient is usually forthcoming.

The late Dr. Irvin Abell of Louisville, who had served as president of the American Medical Association, was my next door neighbor for a time. Naturally I heard a great deal about him. In spite of the fact that he was a great and gifted surgeon, the story most often told by his patients was not how cleverly he wielded the knife but that always before an operation he went down on his knees in prayer to Almighty God.

You see, my doctor friends, it is difficult for me to believe in the spirituality of a doctor if there are no obvious manifestations of it. And the man who believes in this sort of thing has a right to see his doctor in church on Sunday when he is going to put his life in his hands on Monday.

In the words of Dr. Kelly Barnett, "The doctor and the pastor should trust each other, confide in each other, educate each other. The Christian doctor should take the young idealistic minister under his wing. You see, day after tomorrow, on Easter Sunday, he will preach that Jesus Christ won the victory over death. But the young preacher doesn't even know what death means. You do. In a very real sense death is for you the

daily enemy. Show your young minister the corpse of the girl mutilated by an illegal abortionist whose butchery you could not mend because it was too late. Take your pastor with you on your rounds and let him see disease, death and despair. Then, when he preaches about the power of the resurrection, he will know how real are the enemies that his faith must overcome."

Perhaps this matter of spiritual responsibility and cooperation can best be said in this story:

It was in the middle of the wheat season out in Kansas. A young wheat farmer, his lovely wife and six year old son decided to take a walk late one afternoon down into one of the great fields. As they walked, they talked. Even now they were thinking of their son. The crop was good, better than it had been for years. This would mean money for their son's education. As they continued to talk and walk in this waist-high golden

grain, each assumed the other had their small son by the hand. Suddenly they realized that neither had, and the boy was lost. They began frantically to search for him to no avail. For hours they looked with no success. In desperation the father told the mother to continue the search while he went to the nearby village for help. He returned with a hundred and fifty men and at once they began wildly the search for the boy in the tall grain. The hours went by with no success. Finally, with the approach of dawn, one of the men suggested they join hands and walk across the great field together. And soon the little boy who had fallen asleep was found and placed gently in the loving arms of a grateful mother.

There is, my brother, so many ways for us to serve if only we will join hands with the Great Physician—"For the blessing of all and the hurt of none."

THE RELATIONSHIP BETWEEN THE MEDICAL COLLEGE OF ALABAMA AND THE PRACTICING PHYSICIAN

WALTER B. FROMMEYER, JR., M. D.

Associate Dean

Medical College of Alabama

Birmingham, Alabama

The Medical College of Alabama, an integral part of the University of Alabama, had its genesis as the Medical College of Alabama in Mobile in 1859. The College continued to function as a four-year school until 1920 at which time the clinical years were discontinued and the basic science years were transferred to the campus of the University of Alabama in Tuscaloosa for continued education in these disciplines. In 1945 a four-year program was reestablished and the faculty of the basic sciences was moved to Birmingham and the College has continued to function on a four-year basis since that time. Thus, the Medical College of the University of Alabama is no infant, but rather in 1957 is 98 years old.

It is this medical college, the Medical College of your state, in which all of us, as physicians, should and must have a deep and growing interest so that the College may continue to grow and become strong and some day attain the stature of one of the great medical colleges in the South and indeed in the entire United States. The sister institutions of the Medical College of Alabama are the University Hospital and Hillman Clinic and the University of Alabama School of Dentistry, these three units comprising what is now known as the University of Alabama Medical Center. This Medical Center needs the active support and help

of the members of this Association so that it may become an outstanding and great medical center.

The primary purpose of the Medical College of Alabama is medical education in its broadest sense. This purpose not only includes the dissemination, to medical students, of current knowledge in the fields of the medical sciences but also the development of attitudes and a certain philosophy in our students which are befitting a physician. Medical education further embodies the application of that knowledge which the student gains in the four-year medical curriculum, and this becomes manifested as service to people in the form of patient care. In order that adequate and up to date knowledge of the medical sciences may be available to the students, it is necessary that research be done on a continuing basis.

Regarding education, it is pointed out that, in addition to being primarily responsible for the medical education of the 297 students currently enrolled in the Medical College, the faculty of the College participates in the teaching programs of students in the other health fields. These include dental students and dental hygienists in the School of Dentistry and the students in the several school programs of the University Hospital and Hillman Clinic, including students in the Schools of Nursing and Medical Technology, and in Anesthesiology and Radiology. In addition to this are the students of the graduate and postgraduate programs, including interns, residents and graduate students in

A part of an indoctrination seminar held April 19, 1957 in Mobile in connection with the annual session of the Association.

the basic science disciplines. This student body totals somewhat more than 800 who are receiving instruction in the health fields in the Medical Center. To carry out such instruction effectively, there is a nucleus of sincere and well qualified full-time teachers in each of the three units of the Medical Center, and there is a large number of valuable and dedicated faculty members of the Medical College and the School of Dentistry who contribute generously and effectively of their time in these teaching programs without receiving any monetary remuneration from the various budgets of the units in the Medical Center.

Added to this educational responsibility is the service responsibility of patient care. Geographically, our Medical Center includes three other affiliated hospitals which are intimately integrated in the total educational program. These hospitals, in addition to the 600-bed University Hospital, are the Crippled Children's Clinic and Hospital, having 100 beds, the Children's Hospital with 66 beds, and the Veterans Administration Hospital with approximately 500 beds. This is a total aggregate of 1266 beds. It is immediately apparent that a large amount of service of high caliber is rendered to the people through the facilities of these four hospitals. The professional staffs of these hospitals are, almost without exception, on the faculty of the Medical College of Alabama, the School of Dentistry, and the University Hospital. Again it is to be pointed out that these individuals and physicians give unselfishly of their valuable time in the supervision and direction of the care of patients.

In essence, then, medical education holds the medical student as the capstone over the triumvirate of research, education, and service. Closely allied in this scheme of medical education in the Medical College are the postgraduate specialty residency training programs and the refresher courses for physicians in practice. Because of space limitations it will not be possible to consider this important phase of the postgraduate education of the resident physician and the physician in active practice.

As a basis for understanding, and through understanding it is possible for all peoples to work together in a unified fashion, it should be pointed out that 512 students have been graduated from the Medical College of Alabama in its first ten years of existence as a four-year medical college in Birmingham. On June 2, 1957 it is anticipated that an additional 74 students will receive the degree of Doctor of Medicine from the College through the University of Alabama, thereby making a total of 586 graduates in a period of 11 years. This is a somewhat impressive number and has in no small way helped the medical profession of the state to render more and better care to the

people of Alabama. Because of the difficulty in keeping precise and up to date information as to the whereabouts of the graduates of the Medical College, it is hazardous to quote a firm figure on the number of graduates of the College who are currently practicing medicine in the state. However, from 1945 through 1950, 394 students were graduated from the Medical College of Alabama. At that time 293 of these were in active private practice. Of this number, 208 (70%) were engaged in general practice, while 29 (10%) were practicing as part-time specialists and 56 (20%) were full-time specialists. The remainder of the graduates, totaling some 101 physicians, were in internships and residency programs or in the services of the federal government. It seems proper, therefore, to say that about 75% of our graduates are currently practicing medicine in Alabama, while an additional 10% or more are in the armed forces of the United States. The remainder of the graduates of the College are either presently pursuing specialty residency programs in other medical centers throughout the country, are in practice in states other than Alabama, or their whereabouts are unknown.

Regarding our graduates who take residencies in other medical centers it is of interest that some of them have pursued, or are pursuing, graduate training in the main hospitals of such universities as Johns Hopkins, Harvard, Vanderbilt, Cincinnati, Utah, Columbia, Pennsylvania, Washington University in St. Louis, Tulane and Emory, as well as a host of other universities in the South and Southeast. The fact that the graduates of your Medical College can obtain appointments in institutions of such caliber augurs well for the esteem and place of the Medical College of Alabama in fields afar. Much remains to be done, however, if our College is to continue its rise to a place of eminence. One of the best means of accomplishing this is for the students, the graduates, and the members of this Association to look upon the Medical College of Alabama as their medical college and to take an active part in its affairs, as well as a sincere pride in its accomplishments.

At first glance, it would appear that the physician population of the state of Alabama is not faring so well as far as the accretion of young practicing physicians to the physician population of the state is concerned. However, it should be pointed out that the balance between ingress and egress of physicians in Alabama is actually working to our advantage, since through reciprocity the ingress of physicians in Alabama in 1955 totaled 63 whereas in 1956 the total was 79 physicians. Therefore, the balance is in our favor. All of us as physicians still have a tremendous selling job to do in view of the fact that our physician population ratio in the state of

Alabama, of one physician to every 1,400 citizens, is considerably higher than the current national average of one physician to each 713 population. In order to have more physicians in this state, each one of us as members of the Medical Association of the State of Alabama and of our local County Medical Societies has a serious responsibility. This responsibility includes, first, the building up and praising of the attributes of our great state to the youngsters in college, high school and, indeed, in our elementary schools. Secondly, we as physicians must take a long and critical look at medicine as a profession, and if we firmly believe in our chosen profession then it is our duty and responsibility to apprise our children and their friends of the challenge and advantages of medicine as a profession. And thirdly, it is our great responsibility, and this must be a real and continuing responsibility, to back at every turn of the road the Medical College of Alabama. In regard to this three-pronged responsibility, it must be here said that destructive criticism with its complaints and misunderstanding can only lead to rancor and discontent, and this has been the cause of defeat of not a small number of potentially great institutions and professions. On the other hand, constructive criticism is a live and healthy thing. Before one can criticize in a constructive fashion one must have considerable knowledge of, as well as faith in, the object of one's criticism. None of us can be consistently right and, therefore, mistakes are made in this human world of ours. As Dr. Charles Kettering once so aptly said, a person "must learn to fail intelligently, for failing is one of the greatest arts in the world. Once you have failed, analyze the problem and find out why, because each failure is one more step leading up to the cathedral of success."

The strongest proponents of the Medical College of the University of Alabama should be that block of citizens who are most concerned with the function and the product of the Medical College. These citizens are you and I, the physicians of the state of Alabama.

In conclusion, I want to point out that the Medical College of Alabama is one of three units comprising the University of Alabama Medical Center, the other two units being the School of Dentistry and the University Hospital and Hillman Clinic. In addition to approximately 300 medical students there are an additional 500 students currently undertaking training in the Medical Center in the health fields. Slightly over 1,200 hospital beds are located in the Medical Center in the University Hospital and Hillman Clinic and the Medical Center's affiliated hospitals. The Medical Center, including its Medical College, thus is a large enterprise requiring the financial, and particularly the moral, support of the citizens of the

state of Alabama. Specifically, there is needed the understanding and warm support of the members of the Medical Association of the State of Alabama. Our Medical Association and its component County Medical Societies should be the hard core of enthusiasm and source of help as the spear head needed to implement the rise of the Medical College of Alabama in the University of Alabama Medical Center to its rightful and ultimate pinnacle of success. From understanding and faith come unity and help. In this fashion, we as members of the Medical Association of the State of Alabama will live to see our Medical College in our Medical Center become great.

Patients Return to Work After Heart Surgery—People who undergo serious and complicated heart surgery can and do return to work, a recent Massachusetts survey has shown.

The study, reported in the July 6 Journal of the American Medical Association, was made by the Massachusetts Division of Vocational Rehabilitation.

Earlier studies have shown that state rehabilitation agencies are helping very few individuals with heart diseases and that many employers are loathe to hire persons with cardiac ailments.

The Massachusetts division has shown a "pioneer spirit" in helping cardiac patients undergo the necessary corrective surgery, take vocational training, and find appropriate jobs, Dorothy A. Oates, A. B., Dr. William F. Hickey and Dr. Martin J. Bellinger said.

Of 101 patients who underwent surgery between April 24, 1952 and Dec. 31, 1955, 74 are at work and 15 are expected to go to work soon. Ten patients died and two were not helped by surgery.

Eighty-eight of the patients had some form of rheumatic heart disease, 12 had congenital defects, and two had other types of heart disease. The group included 71 women and 30 men, ranging in age from 18 to 60 years.

The operations were all performed in Boston hospitals and were financed by individual insurance or the Massachusetts division. The average cost per case to the division for physical restoration was \$392.53.

The authors noted that it is estimated that for every dollar spent by vocational rehabilitation agencies, \$10 is returned in taxes to the government by the person during his working life.

They also pointed out that financial help is very important to these persons since it contributes to the patients' security and family stability. "When financial insecurity is added to all the other difficulties of this type of illness, all problems are intensified," the authors said.

Of the 74 persons who are rehabilitated, 37 are homemakers and 37 are wage earners who travel daily to their jobs outside their homes. Of the 37 who are employed, 26 returned to the jobs held before surgery. Their jobs range from potato chip packer to governess to bus driver.

The number of months between operation and return to work ranged from 1 to 22, with five as the median number. Forty-six of the group who have gone to work did so less than six months after surgery.

"Despite the general impression that employment of cardiac patients presents serious problems in rehabilitation, heart disease is not an insurmountable obstacle to employment," the authors concluded. They added that more state rehabilitation agencies should undertake to help cardiac patients.

PUBLIC RELATIONS

M. L. MEADORS

Executive Secretary

South Carolina Medical Association

Florence, South Carolina

If you have expected to hear a forensic prescription of artificial stimulants for public relations, you are apt to be disappointed. It is true, of course, that there are certain methods which may serve at times, when intensively applied, to improve relations that have already become bad, and there may be occasions when they work like "miracle drugs," but, like those drugs, these should be used sparingly, and only in extreme cases; otherwise, members of the public who are affected by them are apt to become sensitized, and of course you know better than I do the dismal result when the patient might be dramatically improved or his life saved by the use of a "wonder drug" which, unfortunately, his system will not tolerate. (I trust that is a fitting introduction of remarks to a group of doctors, and now may I proceed to give you what few ideas I have concerning that most intangible and elusive element, "public relations.")

Although I do not pretend to be an expert on the subject, it has received a good deal of attention over the past ten or eleven years, and on the basis of my experience, while "gimmicks" may have their place and must be used in extreme cases, I subscribe wholeheartedly to the principle that the only solid, permanent basis for good public relations is a daily observance of a few simple rules of conduct which anybody can develop and practice who has the will and determination to do so, coupled with a little genuine regard for his fellow man. In other words, public relations without natural human interest is an artificial substance of which I want no part.

First of all, it is axiomatic that a high quality of *professional service* must be dispensed. But assuming that your patient is obtaining the physical results he has a right to expect, the next consideration of paramount importance to him is the sort of *personal treatment* he receives in the process. Good public relations in any field, professional or otherwise, results more directly and consistently from two single elements in combination than from any other stimulus—"the performance of useful service in an agreeable manner." Remember that: *Performance of useful service in an agreeable manner*. You say that is very general. It is, but we can be specific.

A very vital part of the broad subject of personal treatment, and second only in importance to the results obtained, is: what does it cost? Make rea-

sonable charges. Remember that, certainly in the vast majority of the types of practice, it is the volume that counts, and if you have the volume a reasonable fee to each patient is sufficient. It is said that some of the larger chain store organizations are satisfied if each unit can make a net profit of only one dollar a day. Remember, too, that the practice of the professions, both medicine and law, began as a personal service arising out of intellectual interest, a thirst for knowledge and a sense of obligation to use the knowledge obtained for the benefit of others. Financial consideration was entirely secondary and usually inconsequential.

Avoid office procedure which may tend to convince the patient that the fee has now become the prime consideration, but, on the other hand, be frank and forthright about the subject if it is brought up by the patient; and, if possible, adopt some means to let him know that you are prepared to discuss the matter in advance if he wishes to do so. Avoid the implication that discussion of such mundane subjects is beneath the dignity of the great physician and to be handled only by his underling who presides at the cash box, according to the edict handed down from above and which the patient must not presume to question.

It would be difficult to fix a hard and fast rule for dealing with this phase of the business of practicing medicine. Common sense will dictate the best approach in each case. Use it. For routine matters, of course, the cashier can take care of them, but if the treatment or procedure is apt to be long and expensive, and especially if the patient is evidently in modest circumstances, give him some warning in advance. It can be done very tactfully, I assure you. He will be grateful and will pay with much better will.

Avoid the "ivory tower" treatment, the superior manner. Caution your receptionist and office personnel against it in the outer office. The atmosphere produced by the collision of a cold front coming in from the private office with the heat generated by the emotional and mental strain and physical discomfort of the patients who seek your advice is apt to be most unfavorable, and its effects damaging.

Physicians are far above the average in intelligence, in scientific training, in professional skill, but they are still human beings, proficient in one line, called to minister to other human beings, many of whom are highly proficient in other lines.

The third contribution to an indoctrination seminar held April 19, 1957 in Mobile in connection with the annual session of the Association.

The patient wants to be considered as of some individual importance in his own right, aside from his disease or physical malfunction. He wants to be regarded as a person as well as a patient. If what my doctor friends tell me is true, and I have no doubt that it is, most of the supposed illnesses are, in fact, disfunction, which can be corrected if the patient can succeed in gaining the recognition from someone that he thinks he deserves.

Be reasonable, considerate, in the matter of appointments. Don't fill your waiting room with patients arriving one or two hours before they can possibly be seen. I know, of course, that from a financial standpoint it's better to have a backlog of patients in the waiting room to take care of the "no-shows" but I am talking now about cultivating public relations, and sometimes it isn't possible to eat your cake and keep it too.

It isn't a bad idea, either, to cultivate the habit of being punctual yourself. Delays occur inevitably in every person's business day. There is more justification in connection with a doctor's practice than in any other that I know. Emergencies arise. When they do, let your nurse or office assistant say so frankly to the patients who are being delayed beyond the time for their appointment, and express your regret at the unavoidable circumstances. Give them an offer of another appointment at a later date. These are matters of common courtesy to which any individual is entitled, especially that select group made up of your private patients.

Be friendly, affable. Cold dignity, aloofness and austerity may have their rightful place somewhere. It isn't in the relationship between a physician and his patient. Avoid, rather than emphasize, the points of difference between your training and background and that of those whom you serve. You are conscious of the difference, you are grateful, and feel a glow of satisfaction because of it. But you can hardly expect others who may be less fortunate to feel the same. Why impress it upon them, to the detriment of your own public relations?

Confine authoritative statements to matters concerning your own field, and when you seek the advice of your lawyer, your accountant, your minister, your mechanic, or your plumber, give him at least implied recognition of his superior knowledge and skill in his chosen field.

Don't permit a gulf to be created within your own office between yourself and your patient. Remember he has come to see you because he has confidence in your individual skill and knowledge, or because he likes you, or because some friend of his has recommended you. Think of the satisfaction it will give him to come close to you, to feel

that he is within the aura of your good will and your *personal interest* in him.

For heaven's sake, don't be above discussing with the patient, or with members of his family to whom or for whom he is responsible, the nature of his condition and the methods of treatment. Many, many people, not medically trained, are quite capable, and competent to understand far more of medical terms and procedures, the effect of drugs and what they are for, than you might imagine, and, believe me, they resent being treated like a numbskull who hasn't the intelligence to understand the most elementary things about what makes him tick—even when explained to him by you, his personal physician.

Most of what I have said has dealt with the physician's relationship with the private patient, and with good reason. Public relations are a composite of a lot of personal relations. Of course, you do have obligations to the public as a whole. Be sure you recognize and discharge them in your community and in the assistance of the various branches of your municipal, county and state governments wherever possible. A doctor, of course, is subject to subpoena in a court action, to testify as to facts within his knowledge, the same as anyone else, and the manner in which he accepts this responsibility influences the attitude toward him and his profession of the parties to the action, the attorneys, and the court officials and attaches. The rule, of course, is different with respect to expert testimony, but in those instances he should, wherever possible, be willing to make himself and his services available, at reasonable charge, for the benefit of the court and the litigants. The medical profession and the bar in several states have worked out a code of professional conduct in their contacts with each other. These are bound to increase their understanding and mutual consideration, the foundation of good public relations.

The past few decades have brought the highest development of scientific knowledge and accomplishment ever dreamed of. It was only natural that following closely in its wake should come the overweening interest in and emphasis upon scientific education and training. Unfortunately, and this should give us grave concern, this development has been accompanied by a corresponding loss of interest in every other type of training and education. Scientific knowledge, with the industrial know-how and economic skill necessary to support it and furnish the grist for its mill, bids fair—if it has not already done so—to absorb man's intellectual interest completely and totally eclipse his spiritual insight. As science increases, the humanities decrease. Already we are so far along that road it may be too late to turn back. The medical profession, like all other segments of the population, has fallen victim to it, and the

difficulty you have had in the matter of public relations in the past decade has been one of the by-products.

To a professional man, at least, nothing should transcend in importance the individual, and the state of your individual public relations depends upon your recognition of that fact. As a profession, as a professional organization, your public relations cannot be better than the public relations of the individuals who compose it. In fact, they

cannot be as good, for the personal element disappears in the creation of public relations of the group, and the personal element is all-important.

As you have already perceived, I am not a scientist, but in conclusion I wonder if I might express my concept in the terms of a formula:— $\text{Pub R} = (\text{Per R})^2 \text{Mg} + \text{Exp}$ —Public relations equals personal relations squared, magnified and expanded *ad infinitum*. Thank you.

MEDICAL ETHICS

NORBORNE R. CLARKE, JR., M. D.

Mobile, Alabama

It is perhaps well to begin a discussion of medical ethics with a definition of the terms involved. We know in a general way what the word ethics implies, but most of us would have some difficulty in giving an accurate definition. Ethics, as we shall here consider the term, means, in essence, a system of rules for right conduct and practice. The words ethics and morals are almost, but not quite, synonymous, both implying a voluntary acceptance of principles of right living and conduct, as opposed to the enforced submission to legal enactments.

For many centuries the medical profession has followed a pattern of principles of conduct that has guided its activities. This ethical system may be said to have been first formulated by Hippocrates, the Greek physician who lived four centuries before Christ. The Hippocratic Oath, familiar as it has been to countless generations of physicians, will not be quoted here. It is sufficient to say that it is a marvel of compact expression and in about 300 words outlines most of the basic principles of our present day ethical code.

The National Medical Convention, which was the precursor of the American Medical Association, at its first meeting in 1846, appointed a committee to draw up a code of ethics. This proposed code was presented and adopted at the meeting held in Philadelphia in 1847. The present day code under which we guide our activities is known as the Principles of Medical Ethics of the American Medical Association. The last revision was published in June 1955* and is contained in a small booklet that can be obtained for a very nominal sum. It should be read at least once in its entirety by every American physician and should be kept in his library for reference when needed, as these

principles, revised from time to time, have for over a hundred years served and guided American physicians in the proper discharge of their duties and obligations. The preamble to the principles is well worth quoting in its entirety: "These principles are intended to serve the physician as a guide to ethical conduct as he strives to accomplish his prime purpose of serving the common good and improving the health of mankind. They provide a sound basis for solution of many of the problems which arise in his relationship with his patients, with other physicians and with the public. They are not immutable laws to govern the physician. The ethical practitioner needs no such laws. Rather they are standards by which he may determine the propriety of his own conduct. Undoubtedly, interpretation of these principles by an appropriate authority will be required at times. As a rule, however, the physician who is capable, honest, decent, courteous, vigilant and an observer of the Golden Rule, and who conducts his affairs in the light of his own conscientious interpretation of these principles, will find no difficulty in the discharge of his professional obligations."

Through this Code of Ethics, the American Medical Association endeavors to engender and assure proper behavior on the part of its members. There are between 250 and 300 thousand physicians in active practice in the United States today, and it surprises no one to know that there are some who are derelict in their duties and have abused public confidence and brought discredit on the profession. However, the great majority of doctors are ethical and quick to resent and to punish any violation of professional ethics. Doctors have effective methods of correcting abuses and punishing offenders in their midst, and they have had these means and have used them effectively over the centuries to defend and uphold professional honor and integrity. The gross, willful violator of ethical principles soon finds himself banished from the company of his fellows, deprived of privileges and

The concluding part of an indoctrination seminar held April 19, 1957 in Mobile in connection with the annual session of the Association.

*A still later revision was made in June of 1957 and is contained in the Organization Section of this issue of the Journal—Editor.

honors, and in the unhappy position of a lonely professional outcast.

Examination and study of the Principles of Medical Ethics of the American Medical Association reveal that this code deals in part with the duties of physicians in relationship to patients; other portions outline the proper conduct to be observed in dealing with fellow physicians; and still other parts are devoted to a description of the physician's duties and responsibilities in his relationship with the public in general. In order to insure correct and equitable interpretation of these broad principles, an appropriate deliberative body is necessary. On the County Medical Society level this would be the Grievance Committee and the Board of Censors which would refer any major violation to the State Medical Association. The Judicial Council of the American Medical Association is the final deliberative body whose duty it is to rule on matters of medical ethics.

Time will not permit us here to attempt a detailed description of the provisions found in the Principles of Medical Ethics. In this little book, however, one can readily find the well expressed attitude of organized American Medicine on many pertinent subjects such as advertising, self-laudation, payment for professional services, ownership of patents, copyrights and secret remedies, evasion of legal restrictions, the care of patients, the safeguarding of professional confidences, conduct to be observed in consultations, and the duties and obligation of physicians to the public as citizens. These policies and principles, as approved and advocated by the American Medical Association, are based on long experience and will be found to be safe and sensible rules for the physician to follow.

The avowed purpose and objective of the medical profession is the promotion of the common good and the safe-guarding of human health. The physician's life should be devoted and dedicated, first of all, to the service of others, and in this his calling resembles that of the minister and priest. The high ethical principles which guide the conduct of his professional activities help make him something more than merely a highly trained technician and distinguishes the practice of his profession from the mere plying of a trade.

The medical profession has enjoyed the confidence of the public for many centuries. People turn to it with hope and trust, not alone for its skill and knowledge but also because they have learned to know that the true physician wants and tries to do what is best for his patient at all times within the limits of human resources and ability. What a wonderful thing this public confidence is and how zealous we should be to merit the faith and trust imposed upon us!

The practice of medicine is perhaps the most arduous of all professions. No mere monetary reward can ever fully compensate the conscientious physician for the trials and tribulations he must constantly endure, for, wonderful as medical science now is, it has its sad limitations and tragic inadequacies that must be faced with courage and equanimity by the physician daily. One hears but little of the art of medicine now days but it is still as necessary a part of medical practice as is the science. Patients appreciate the doctor's sympathy and interest, his honesty and integrity, his comforting manner, his reassurance and encouragement, his steadfast faithfulness to duty, and his courage, as much and sometimes even more than his skill and knowledge. Our code of ethics implements our science and graces and embellishes our art. Its pursuance is largely responsible for the ancient trust that people in general feel in our profession and which brings them to us for cure, help, and comfort every day of this troublous life.

It is to be devoutly hoped that in the future our profession, trying all things fairly and holding fast to that which is good, will continue to be lead by the high principles and ethical concepts which have helped it to serve humanity so well and so long.

Hazards of Jet Aircraft Maintenance Listed—Some of the health problems encountered in repairing and maintaining jet planes, and some preventive measures have been discussed by two Air Force physicians.

The most hazardous of these operations is the cleaning and repair of the aircraft fuel cells. In fact, it is potentially more dangerous than cleaning bulk gasoline storage tanks, according to 1st Lieut. Americo R. Lombardi (MSC), and Capt. Arthur S. Lurie (MC).

The fuel cells of the B-47 jet bomber are rubber-lined cubicles that fill cavities within the aircraft fuselage. They are difficult to reach and allow a very small amount of working room. Since most of the cells are connected, it is often necessary to crawl from one cell into another, thus penetrating deeper into the fuselage and away from fresh air, the doctors said in the June 1 Journal of the American Medical Association.

These "extremely poor" working conditions present a number of hazards, including fire and explosion, acute intoxication from fuel vapors, systemic poisoning from tetraethyl lead, skin reactions from direct contact with petroleum hydrocarbons, and the acute psychological problem of confinement in a small space.

Seven of 12 airmen studied at Smoky Hill Air Force Base, Salina, Kan., reported various physical symptoms when they did not wear a protective face mask. These included dizziness, indigestion, headache, visual blurriness, "echoing," and repetition of thoughts.

Because these health problems may in the "not-too-distant future" be encountered by civilians working on jet airliners, the authors recommended some safety measures for persons working on jet fuel cells.

They said the work should be performed by at least two men, with one man outside the cell serving as the observer of the man within the cell. They should carry on a continuous conversation, so that the observer may recognize any emergency and take prompt action in rescuing the repairman.



Editorials

FAR EAST INFLUENZA

Dr. Leroy E. Burney, Surgeon General of the Public Health Service, has established an advisory committee of physicians and health officers to consider precautionary steps in the United States against the current influenza epidemic in the Far East.

"We have already taken several precautionary measures," Dr. Burney said, "But we want to make sure that we have the best advice possible so that no protective action is overlooked."

The advisory committee met at the Department of Health, Education, and Welfare, June 10.

Epidemics in the Far East have been caused by a new strain of influenza virus which apparently is not controlled by current influenza vaccine. Much of the influenza caused by the new virus has been relatively mild marked by a 3 or 4 day period of fever and other typical flu symptoms.

No confirmed cases of the Far Eastern flu strain in the United States have been reported to the Public Health Service.

The summer months normally are the months of lowest influenza incidence in this country. The disease usually is most prevalent in the fall and winter.

Dr. Burney said the following precautionary measures have already been taken by the Public Health Service:

The Service has provided samples of the new influenza virus to manufacturers of vaccine in the U. S. Consultations with manufacturers will be continued during the coming weeks on the possibilities of producing vaccine for general distribution if this should be indicated. Influenza vaccine has been used successfully in the past although it is sometimes ineffective against certain strains.

Foreign quarantine inspectors, which the Public Health Service stations at all international sea and air ports, are advising travelers from the Orient and the Philippines to see their private physicians if they develop a respiratory illness within ten days after their arrival. The names and addresses of passengers who have a respiratory illness when they arrive in the United States are forwarded to

the health officers of the communities to which they are going.

The Service has developed antigen testing agents for diagnosing infection caused by the new strain of influenza. These antigens will soon be sent to collaborating laboratories throughout the Western Hemisphere to help them determine whether or not cases of respiratory illness are caused by the new influenza strain. Until enough antigens are available to supply these laboratories, the Communicable Disease Center of the Public Health Service will make the identifying tests. All state health officers have been informed about the testing system.

State and local public health officials are being asked to encourage private physicians to report suspicious cases so that there will be information on any cases of this type of influenza which might develop in the United States.

Most communities now have health departments which link to a State-Federal-International reporting system so that individual cases are quickly spotted. Prompt treatment with antibiotics can prevent the bacterial complications which have been the cause of most of the fatalities in past influenza outbreaks.

The Service's Epidemic Intelligence Officers, who are specialists in tracking down communicable diseases, have been alerted to assist private physicians and health officers in investigating any early signs of new influenza type. State health officers are being given up-to-date information on the Asian epidemic and the Service is asking their assistance in rapid detection of cases of influenza which may appear. The Service is also working closely with the military services which made the first cultures of the new virus strain.

Close liaison is being maintained with health authorities in South America and Australia, countries that are going into their winter season and therefore might expect a high incidence of flu within a few weeks if it is spreading out of the Far East. The World Health Organization Influenza Information Center and the World Health Organization International Influenza Center for the Americas are operated by the Public Health Service. These centers receive reports on out-

breaks and samples of the virus from all parts of the world.

Members of the Surgeon General's Advisory Committee to advise on the influenza situation include:

Dr. T. F. Sellers, Director, Georgia Department of Public Health, Association of State and Territorial Health Officers; Dr. Mack I. Shanholtz, State Health Commissioner, Virginia State Department of Health, Association of State and Territorial Health Officers; Lt. Col. Herschel E. Griffin, Division of Preventive Medicine, Office of the Surgeon General, Department of the Army, Department of Defense; Dr. Frederick M. Davenport, Director, Commission on Influenza, AFEB, and Professor, Department of Epidemiology, University of Michigan School of Public Health, Armed Forces Epidemiology Board; Dr. Malcolm Phelps, President, Academy of General Practice; Dr. Hugh Hussey, Member, Board of Trustees, American Medical Association, and Dr. Robert F. Korns, Assistant Commissioner of Health, New York State Health Department, American Public Health Association. The American Academy of Pediatrics also will be represented.

FUTURE EXTENT AND COST OF ILLNESS

With the advance of medical science and the greater accessibility of medical services, medical costs and even the incidence of disease may increase rather than decrease, Dr. David B. Allman of Atlantic City, New Jersey, President of the American Medical Association declared in Washington, D. C. recently.

In an address before the annual meeting of the Health Insurance Association of America, at the Sheraton-Park Hotel, Dr. Allman said the future extent and cost of illness will depend on many factors. "The advance of medical science," he declared, "will create new diagnostic and therapeutic methods not now foreseen. New drugs will be developed whose effects on the course of human disease will equal or exceed today's wonder drugs. The prolongation of life will increase those diseases of senescence which can be palliated, but not cured. The chronic diseases of aging will increase."

The New Jersey surgeon added: "Ancillary health services—especially in technical fields like chemistry, physics, biology, and others—will induce rapid changes in the incidence of disease." Dr. Allman said "the advance of medical science, and the improved accessibility of medical service, may in fact increase the totality of disease and the cost of diagnosing and treating it."

Dr. Allman told the health insurance executives that these problems must be met by changes in prepayment and insurance mechanisms that per-

mit a reasonable degree of responsibility to be assumed by the patient.

The speaker stated that, in those health insurance mechanisms in which the patient himself does not assume a portion of the financial cost, someone else must do it. "It is not without significance that the Blue Cross Commission and the American Hospital Association testified in favor of this Administration's health reinsurance bill that properly was buried in committee," he continued. "It can be expected that as hospital rates continue to rise at an anticipated rate of 5 per cent per year the pressure for increased Blue Cross premiums must also increase. Under these circumstances it would not be surprising if the Blue Cross sought government subsidy ever more vigorously."

From every point of view, Dr. Allman said, the development of major hospital and medical expense insurance has been one of the most encouraging incidents in the history of health insurance. He declared he was convinced that the vast majority of physicians will cooperate whole-heartedly in the sense of maintaining equitable fees so that the promotion of this type of insurance will not be impeded. The speaker urged insurance companies to step up their program of physician-relations so that physicians can fully understand the relation between fees and the saleability of major medical insurance.

Summing up the role and responsibility of medicine in the financing of health care costs, Dr. Allman declared that in an economic sense medicine seeks a price for its service at such a level that its services can be purchased by the public through reasonable financing mechanisms that do not adversely affect the quality of care rendered. From a social viewpoint, he said the physician must oppose any financing mechanism that is a step toward the socialization of the economy. Politically and legislatively, Dr. Allman pointed out, the physician will oppose government programs that assume the responsibility for financing health care costs that are properly and most wisely the obligation and responsibility of individuals.

"In a word," said the speaker, "the physician will support or oppose any program for the financing of health care costs depending on the effect of that program on the quality of the service the physician renders. So long as the insurance you promote," he told the insurance company executives, "is consistent with the maintenance of high quality medical care you can be assured that medicine will support you."

The Health Insurance Association of America is a trade association of 255 insurance companies in the United States and Canada, representing more than 80% of the health insurance handled by insurance companies in the country. More than

60 million persons today are protected by health insurance policies written by insurance companies.

BLUE CROSS AND VOLUNTARY HOSPITALS

Without Blue Cross or a similar plan for prepayment of hospitalization, nonprofit hospitals would almost certainly cease to exist on a voluntary basis, and government might be forced to step in, according to the director of Michigan Blue Cross.

William S. McNary, executive vice president of the Michigan Hospital Service, writing on "Blue Cross Plans and Voluntary Hospitals—Partnership of Public Service" in the June 1 issue of *Hospitals*, Journal of the American Hospital Association, pointed out that hospitals and Blue Cross are essential to each other.

"The voluntary hospitals, in creating Blue Cross, created a way to prepay needed hospital care that was generally available, practical, easy and eminently economical," Mr. McNary said.

He observed: "There is little doubt that without Blue Cross, or something closely akin to it, today's modern hospitals could no more exist on a voluntary basis than the heavy consumer goods industries could exist without installment buying.

"Best proof of this is the answer a nationally-known figure in industry gave when asked what he thought would happen if Blue Cross were to close its doors. What he said boiled down to this: 'If Blue Cross stopped today, we would have government medicine tomorrow.' "

Mr. McNary pointed out that "Blue Cross performs an essential function in our medical economy. It's a function that has so become the warp and woof of our social and economic carpet that prompt high level government intervention would result if something pulled the rug from under Blue Cross."

It is vital for Blue Cross, hospitals and the people served by both that a close family relationship be maintained between hospitals and Blue Cross, he said.

The strength of the relationship between Blue Cross and the voluntary hospitals rests on a number of factors, including the official endorsement of the American Hospital Association, the support of hospital administrators, trustees and the more than 50 million Blue Cross members, and the unique community rate principle under which Blue Cross operates.

"Blue Cross, like the voluntary hospital, and for the same reason, is non-profit and tax free. These privileges carry with them the responsibility to make the highest possible return to subscribers," Mr. McNary added.

He said that Blue Cross is sometimes criticized for its attitude toward commercial insurance companies engaged in health care prepayment. However, Blue Cross does recognize the values offered in this field by reputable companies, he said, and "leaders of the Blue Cross movement admit that they probably would not be doing as good a job for the people and for the hospitals if there were no competition."

"If an insurance company or any other agency offers to the general public and the hospitals the quality and quantity of benefits under the conditions and principles of Blue Cross, then, and only then, can the hospitals afford to extend to them the same rights and privileges which Blue Cross now enjoys," Mr. McNary maintained.

Kwashiorkor Symptoms, Treatment Prescribed—Children suffering from a serious and often fatal disease of malnutrition can be cured with a relatively simple treatment—drinking skim milk, five Central American doctors said recently.

Kwashiorkor, resulting from severe protein deficiency, is rare in the United States, but is a common disease among preschool children in most underdeveloped parts of the world, the doctors said in the June 1 Journal of the American Medical Association.

Protein deficiency begins to develop as soon as the quantity of protein contained in the mother's milk becomes inadequate for the needs of the growing child. The inadequacy steadily increases as the child later receives a diet high in carbohydrate and low in protein.

Some children pass through the preschool period with only a mild protein deficiency and resume more normal growth and development when they reach school age. However, many develop kwashiorkor and without proper treatment die of this disease.

Symptoms include retarded growth and development, loss of appetite, apathy, irritability, skin changes, brittle hair and nails, anemia, fluid retention and swelling of the body, and changes in the internal organs.

An acute episode of kwashiorkor may be precipitated in a child already generally malnourished by infectious diarrhea; an infectious disease such as measles or whooping cough; an emotional shock, or the worsening of the family's economic condition. At times the basic diet is so poor that the child gradually develops kwashiorkor without any identifiable cause.

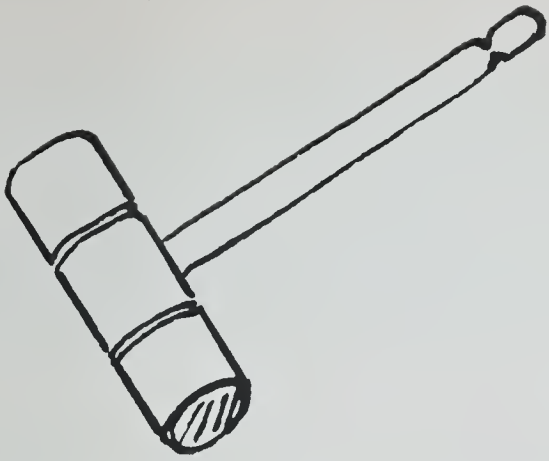
When dried skim milk or half-skim milk is given, most of the symptoms disappear or greatly improve within seven to 10 days.

This "dramatic rapidity" of recovery is a "remarkable thing," the authors said, since malnourished children would not be expected to be able to eat because of their shrunken stomachs.

The authors' experience with Central American children indicates that oral administration of milk or vegetable protein mixtures, by stomach tube if necessary, is the preferred treatment. Injections of protein material, vitamins, or other drugs are not necessary.

They also noted that when these children are hospitalized, they should be isolated to prevent exposure to infectious diseases.

The authors are Drs. Nevin S. Scrimshaw, Moises Behar, Carlos Tejada, and Fernando Viteri, and Guillermo Arroyave, Ph. D., of the Institute of Nutrition of Central America and Panama, Guatemala.



President's Page

An editorial writer in one of our local papers recently made the statement that democracy in the United States is not a fixed thing and can be changed—sometimes rather insidiously. The same could be said of the medical profession. We have encouraged both change and progress, and have prided ourselves in the broad advances in all the fields of medicine.

There was much ado after World War II about the difficulty of getting into medical schools. This was due to the sudden release of large numbers of young men from the services who wanted to study medicine. There are still three applicants for each place in the medical schools in the U. S. One third of these have the desire but no educational background for admission, but continue to reapply.

More recently there has been a revision in medical courses to encourage students, yet the Virginia Medical Monthly (March 1957) deplored the lack of cultural knowledge among medical students. Another discouraging factor has been the long period of training which requires a man to be thirty years old before he can earn his own living.

Emerson has said, "Colleges can highly serve us where they aim, not to drill, but to create." Dr. Nathan M. Pusey, President of Harvard University, recently said that our country desperately needs the informed and truly creative among its young people.

Much interest is being shown in the three most recently organized medical schools in the country. Starting from scratch and not bound by tradition, the ideas that went into the curriculum and organization had to be subjected to stern tests for their acceptance and approval. Each has adopted many of the newer approaches to teaching. The Albert Einstein Medical College in Bronx, New York, has already breached the sharp dividing line between the first two years and the last two years of work. Cases from the Bronx Municipal Hospital are used in the first two years in the study of anatomy and physiology. In the third and fourth years the student takes charge of preliminary medical care of whole families—seeing them whole in a socio-economic setting.

At Seton Hall University College of Medicine, Jersey City, New Jersey regards integration of material as an established factor in medical school education. There will be an attempt to reduce ma-

terial time and increase ward work with adequate instructors.

The University of Florida College of Medicine is adapting its curriculum not only to the needs of the individual patients and their families but to the background of a region. Consideration is being given to population trends in age range, distribution of population of the state, and the size of the communities.

Johns Hopkins University School of Medicine has extensively revised its program of medical education with the idea of special student selection. The objectives of the program have been stated as follows: (1) to shorten the formal education of physicians without sacrificing quality of training; (2) to overcome the barrier between the liberal arts and medical sciences by enabling students in medical school to continue studies in the humanities and social sciences; (3) to encourage more students to enter careers in the basic sciences of medicine—such as physiology, anatomy and pharmacology—where the greatest shortages of teachers and research workers now exist.

One of the department heads of the Medical College of Alabama told me last year he believed the course there could be limited to three years. While the University of Alabama Medical School did not exactly start from scratch, the move to Birmingham necessitated new buildings, new organization, and new faculty. The tremendous job that has been done in such a short time, with limited funds, attests the unusual ability, determination and sincerity of its faculty. There graduates are showing excellent training and ability.

Medical educators seem to be thinking more and more of the various concepts of "total medicine," "comprehensive medicine," and "family care." Having watched the problems of medicine multiply over the last thirty years at both the state and national level, it seems appropriate that other objectives must be considered.



ORGANIZATION SECTION

FIRST GENERAL PLANNING MEETING

The Association has held its first general planning meeting. Dr. John A. Martin called a meeting of officers, committee chairmen of the Association, and the Advisory Committee to the executive secretary on August 3 and 4. The purpose of the meeting was to derive a concrete statement of goals and to formulate a definite program of work for each committee for the current year. The administration of the Association considers the two-day meeting the most important of the year. The planning and activities of the officers and committees of the Association which have led up to this meeting should be of interest to every member.

A year ago, the expansion of the State Association program, which had been approved by the Board of Censors, was begun. The duties of executive secretary were assumed by the then director of public relations, and the first addition in personnel was made to the staff of his office. Since that time, an executive assistant, who will work principally in the field of public relations, has been added. It is possible that additional clerical help will be required as the full program develops. In the year in which the more comprehensive program has been pursued, the Association has made steady progress toward the goals which were discussed when the program was approved, even though those goals were not clearly defined at the time.

There was a valid reason why the program and the goals to be striven for could not be stated in definite terms or clearly thought through when the changes in the program were first outlined and approved. Much thought and many hours of planning had gone into the overall, long-range planning, and the scope of the change had been considered from all angles; but committee members needed time in which to give further study to the aims and purposes of their committees, and experience was needed to gauge time and personnel required to keep the clerical work in line with the requirements of the officers and committees of the Association.

After a year's study and experience, the president called together the guiding group.

The first session of the general planning meeting was a work session in which the meeting was divided into three bureaus. The committee chair-

men of each bureau sat with the respective advisory committee members and each chairman presented for discussion the proposed plans for his committee for the year. This procedure provided an opportunity for all committees which work together under one bureau to learn of the work and plans of the others in that group and to integrate better the activities of committees whose work is related. It also meant that we were able to draw a concrete program that had been designed by one committee but that had had the benefit of the thinking of other people.

In the second session of the meeting, the entire group came together for discussion of each bureau's program. This meant that a definite statement of goals and definite outline of plans for the entire Association could be made from the reports for the three bureaus, again, with the benefit of the thinking of the other members.

In the past, there has not been coordination of work; there has been overlapping of effort; the officers had no means of being a part of the administrative group as they should be. The officers and the committees have been doing good work, but more or less in a vacuum with the exception of annual reports. The Association now has a concrete statement of goals and a well integrated plan of action. It has a stated program, by which its accomplishments can be measured. The Association is growing and is rapidly becoming a well knit, active, informed group which is led by a working group that is welded together better than ever before. A greater number of interested members have been included in the group of leaders that has participated in the past.

One of the factors which motivated the change in the internal organization of the Association and caused the leaders of the group to evaluate and analyze it to find a solution to a problem was the apparent feeling among some of the members who had joined the Association in recent years that they were not being kept informed of the activities of the group and therefore did not feel a part of it. With concrete, stated goals and a well defined plan of action, the membership can and will be kept informed. Then it will be up to the individual member to decide whether he will be an active, interested member or one who "just belongs."

The administration of your Association feels that

the first general planning meeting was a success. It is believed that each member of the state group will benefit by its work in the months to come.

REPORT ON ACTIONS OF THE HOUSE OF DELEGATES, AMERICAN MEDICAL ASSOCIATION

106TH ANNUAL MEETING

JUNE 3-7, 1957

NEW YORK CITY

Revision of the Principles of Medical Ethics, relations with the United Mine Workers of America Welfare and Retirement Fund, the federal government's Medicare program, new standards for medical schools, a new statement on occupational health programs, and the issue of Social Security benefits for physicians were among the wide variety of subjects acted upon by the House of Delegates at the American Medical Association's 106th annual meeting held June 3-7 in New York City.

Dr. Gunnar Gundersen of La Crosse, Wis., member of the A. M. A. Board of Trustees since 1948 and chairman for the past two years, was unanimously chosen president-elect for the year ahead. Dr. Gundersen, who also was first chairman of the Joint Commission on Accreditation of Hospitals from 1951 to 1953, will become president of the American Medical Association at the June 1958 meeting in San Francisco. There he will succeed Dr. David B. Allman of Atlantic City, N. J., who became the 111th president at this meeting of the Association.

The House of Delegates voted the 1957 Distinguished Service Award of the American Medical Association to Dr. Tom Douglas Spies, head of the department of nutrition and metabolism at Northwestern University Medical School, Chicago, and director of the nutrition clinic at Hillman Hospital, Birmingham, Ala., for his outstanding contributions to the science of human nutrition. For only the third time in A. M. A. history, the House also voted a special citation to a layman for outstanding service in advancing the ideals of medicine and contributing to the public welfare. Recipient of this award was Henry Viscardi Jr. of West Hempstead, N. Y., founder and president of Abilities, Inc., which employs only severely disabled persons.

Physician registration at the New York meeting had already reached an all-time high by the fourth day of the meeting with 18,982 counted and scores of registration cards still unprocessed. The previous high was chalked up at the 1953 New York meeting when the five-day total was 17,958 physicians.

NEW PRINCIPLES OF MEDICAL ETHICS

The House approved the long-discussed revision of the Principles of Medical Ethics, originally submitted at the 1956 annual meeting in Chicago. The final version, presented by the Council on Consti-

tution and Bylaws and then amended by reference committee and House discussions in New York, now reads as follows:

Preamble

These principles are intended to aid physicians individually and collectively in maintaining a high level of ethical conduct. They are not laws but standards by which a physician may determine the propriety of his conduct in his relationship with patients, with colleagues, with members of allied professions, and with the public.

Section 1.—The principal objective of the medical profession is to render service to humanity with full respect for the dignity of man. Physicians should merit the confidence of patients entrusted to their care, rendering to each a full measure of service and devotion.

Section 2.—Physicians should strive continually to improve medical knowledge and skill, and should make available to their patients and colleagues the benefits of their professional attainments.

Section 3.—A physician should practice a method of healing founded on a scientific basis; and he should not voluntarily associate professionally with anyone who violates this principle.

Section 4.—The medical profession should safeguard the public and itself against physicians deficient in moral character or professional competence. Physicians should observe all laws, uphold the dignity and honor of the profession, and accept its self-imposed disciplines. They should expose, without hesitation, illegal or unethical conduct of fellow members of the profession.

Section 5.—A physician may choose whom he will serve. In an emergency, however, he should render service to the best of his ability. Having undertaken the care of a patient, he may not neglect him; and unless he has been discharged he may discontinue his services only after giving adequate notice. He should not solicit patients.

Section 6.—A physician should not dispose of his services under terms or conditions which tend to interfere with or impair the free and complete exercise of his medical judgment and skill or tend to cause a deterioration of the quality of medical care.

Section 7.—In the practice of medicine a physician should limit the source of his professional income to medical services actually rendered by him, or under his supervision, to his patients. His fee should be commensurate with the services rendered and the patient's ability to pay. He should neither pay nor receive a commission for referral of patients. Drugs, remedies or appliances may be dispensed or supplied by the physician provided it is in the best interests of the patient.

Section 8.—A physician should seek consultation upon request; in doubtful or difficult cases; or whenever it appears that the quality of medical service may be enhanced thereby.

Section 9.—A physician may not reveal the confidences entrusted to him in the course of medical attendance, or the deficiencies he may observe in the character of patients, unless he is required to do so by law or unless it becomes necessary in order to protect the welfare of the individual or of the community.

Section 10.—The honored ideals of the medical profession imply that the responsibilities of the physician extend not only to the individual but also to society where these responsibilities deserve his interest and participation in activities which have the purpose of improving both the health and the well-being of the individual and the community.

In approving the new Principles of Medical Ethics, the House of Delegates also reaffirmed the "Guides for Conduct for Physicians in Relationships with Institutions," adopted in 1951, and requested the Board of Trustees to devise and initiate a campaign to educate both physicians and the general public to the dangers inherent in the illegal corporate practice of medicine in its various forms.

GUIDES FOR RELATIONS WITH UMWA FUND

In a key action on the basic issue of third-party intervention, as it affects the patient's free choice of physician and the physician's method of remuneration, the House adopted the "Suggested Guides to Relationships Between State and County Medical Societies and the United Mine Workers of America Welfare and Retirement Fund," which were submitted by the A. M. A. Committee on Medical Care for Industrial Workers. In approving the guides, the House also recommended that the Board of Trustees study the feasibility and possibility of setting up similar guides for relations with other third-party groups such as management and labor union plans.

The statement, which outlines both medical society and UMWA responsibilities, contains these "General Guides":

1. All persons, including the beneficiaries of a third-party medical program such as the UMWA Fund, should have available to them good medical care and should be free to select their own physicians from among those willing and able to render such service.

2. Free choice of physician and hospital by the patient should be preserved:

- a. Every physician duly licensed by the state to practice medicine and surgery should be assumed at the outset to be competent in the field in which he claims to be, unless considered otherwise by his peers.

- b. A physician should accept only such terms or conditions for dispensing his services as will insure his free and complete exercise of independent medical judgment and skill, insure the quality of medical care, and avoid the exploitation of his services for financial profit.

- c. The medical profession does not concede to a third party such as the UMWA Welfare and Retirement Fund in a medical care program the prerogative of passing judgment on the treatment rendered by physicians, including the necessity of hospitalization, length of stay, and the like.

3. A fee-for-service method of payment for physicians should be maintained except under unusual circumstances. These unusual circumstances shall be determined to exist only after a conference of the liaison committee and representatives of the Fund.

4. The qualifications of physicians to be on the hospital staff and membership on the hospital staffs is to be determined solely by local hospital staffs and by local governing boards of hospitals.

THE MEDICARE PROGRAM

The House considered three resolutions dealing

with the federal government's Medicare program for the dependents of servicemen. The delegates adopted one resolution condemning any payments under the Medicare program "to or on behalf of any resident, fellow, intern or other house officer in similar status who is participating in a training program." Government sanction of such payments, the House declared, would give impetus to the improper corporate practice of medicine by hospitals or other nonmedical bodies. Such proposals, the House added, would violate traditional patterns of American medical practices, seriously aggravate problems of hospital-physician relationships, encourage charges by hospitals for residents' services to patients not under the Medicare program, and create a variety of additional problems in such areas as medical licensure and health insurance.

In another action on Medicare, the House recommended that the decision on type of contract and whether or not a fee schedule is included in future contract negotiations should be left to individual state determination. In this connection, however, the House restated the A. M. A. contention that: the Dependent Medical Care Act as enacted by Congress does not require fixed fee schedules; the establishment of such schedules would be more expensive than permitting physicians to charge their normal fees, and fixed fee schedules would ultimately disrupt the economics of medical practice.

The House also suggested that the A. M. A. attempt to have existing Medicare regulations amended to incorporate the Association's policy that the practice of anesthesiology, pathology, radiology and physical medicine constitutes the practice of medicine, and that fees for services by physicians in these specialties should be paid to the physician rendering the services.

NEW STATEMENT ON MEDICAL SCHOOLS

To replace the "Essentials of an Acceptable Medical School," initially approved by the House of Delegates in 1910 and most recently revised in 1951, the House adopted a new statement entitled "Functions and Structure of a Modern Medical School." Presentation of the document followed a year of careful study by the Council on Medical Education and Hospitals in collaboration with the Association of American Medical Colleges.

The statement is intended to provide flexible guides which will "assist in attaining medical education of ever higher standards" and "serve as general but not specific criteria in the medical school accreditation program." The document encourages soundly conceived experimentation in medical education, and it discourages excessive concern with standardization.

"No rigid curriculum can be prescribed for accomplishing the objectives of medical education,"

it states. "On the contrary, it is the responsibility of the faculty of each school continually to reevaluate its curriculum and to provide in accordance with its own particular setting and in recognition of advances in science a sound and well-integrated educational program."

OCCUPATIONAL HEALTH PROGRAMS

The House also approved a new statement on the "Scope, Objectives and Functions of Occupational Health Programs," submitted through the Board of Trustees by the Council on Industrial Health. The Board report to the House said: "The statement describes and defines orthodox in-plant medical programs as understood in this county today and distinguishes clearly between such programs and the various plans for comprehensive medical care of the sick. It should help to resolve misunderstandings concerning the specialty of occupational medicine."

In adopting the statement, the House agreed with a reference committee report which declared that "the House has before it a statement which for the first time clearly defines the scope, objectives and functions of occupational health programs. It marks the needs and boundaries of occupational medicine. It states in a positive fashion the proper place of occupational health programs in the practice of medicine and it clearly charts the pathways of communication between physicians in occupational health programs and physicians in the private practice of medicine."

SOCIAL SECURITY FOR DOCTORS

Two resolutions favoring compulsory inclusion of physicians in the federal Social Security system and another one calling for a nationwide referendum of A. M. A. members on the issue were rejected by the House. The delegates reaffirmed their opposition to compulsory coverage of physicians under the Old Age and Survivors Insurance provisions of the Social Security Act. They also recommended a strongly stepped-up informational program of education which will reach every member of the Association, explaining the reasons underlying the position of the House of Delegates on this issue. The House at the same time reaffirmed its support of the Jenkins-Keogh Bills.

ALABAMA PHARMACEUTICAL ASSOCIATION PRESENTS DOCTOR'S BAG

Dr. J. H. Gentry, Aliceville, has been notified that he is the winner of the doctor's bag which was offered as a prize to one of the registrants in the APA guest book during the meeting of the Medical Association of the State of Alabama at Mobile in April. In her letter to Dr. Gentry, informing of his good fortune, Mrs. Thelma Morris Coburn, Executive Secretary of the APA, stated in

part: "The bag is simply a small token of esteem from APA to the Medical Association members. We hope you will find it useful."

Articles Explain Summer Vacation Rules—In addition to listing some helpful "dos and don'ts" for pleasant vacations, three articles in the July Today's Health gave some "whys."

The articles in the magazine, which is published by the American Medical Association, dealt with sunburn, artificial respiration, and sightseers' foot care.

A New York City physician, Dr. James A. Brussel, explained why some people sunburn more readily than others. Physical, glandular, genetic and chemical factors all play a role in a person's susceptibility, along with time of day, weather and geography.

Surveys show that blue-eyed persons are particularly prone to suffer from sunburn, as are blonds and red-heads. Negroes fare better than Caucasians under the sunburning or ultraviolet rays. Scientists think this difference is not due to pigmentation but rather to some undiscovered factors.

Sunburn occurs more frequently in women on the first day of the menstrual cycle and between the second and seventh months of pregnancy, apparently because glandular factors influence the protective pigmentation and hardening of the skin.

Perfumes containing oil of citron or bergamot applied to the skin increase susceptibility to sunburn. So does taking sulfa drugs.

Fog and clouds are comparatively poor protection against ultraviolet rays, so that severe sunburn is possible even on a cool and cloudy day. Even when shielded by a beach umbrella, people are burned because the sun's rays are reflected from the water and sand. This accounts for sunburn at the beach being more severe than that acquired inland even under the same sun at the same time. Moisture in the air increases people's susceptibility to burn by softening the skin's external protective layers, making them more vulnerable to burning.

The sun's rays produce the most severe burn between 10 a.m. and 2 p.m. As afternoon wears on, the sunburn-producing ultraviolet rays are less numerous and therefore their effect is not as strong.

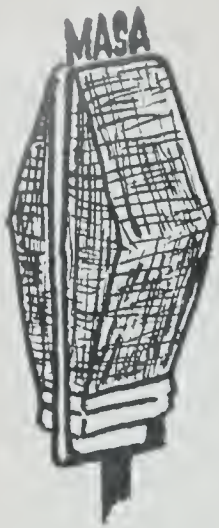
The main rule to observe in getting a tan is: take it slowly and let the skin gradually build up its protective pigmentation and thickness, Dr. Brussel said.

Miss Sue Gerard, a physical education teacher at Christian College, Columbia, Mo., told how to save a life with artificial respiration. If a person is not breathing, he will die within a few minutes. Lack of oxygen, or suffocation, is the cause of death in drowning, gas poisoning, cave-ins, electrocution, strangulation and certain blows on the head. Artificial respiration must be started at once.

In addition to explaining how to give artificial respiration, Miss Gerard also explained why it works:

"Exhaling is the thing that a suffocating person cannot do alone. Pressure on his 'breathing box' will cause him to exhale; when that pressure is relaxed air will likely rush in."

Today's back-pressure arm-lift method not only makes the patient exhale, but also helps him to inhale. She pointed out that a pocket-sized card, illustrating the method, may be obtained by sending a self-addressed stamped envelope to the A. M. A. Council on Medical Physics, 535 N. Dearborn St., Chicago 10, Ill.



ASSOCIATION FORUM

THE MEDICAL SECRETARY

The key to improved efficiency in a physician's office may be in the hands of his medical office personnel, a nationwide survey reveals.

Are medical secretaries and assistants properly trained for their jobs? Does the physician-employer properly delegate duties to office personnel to make best use of individual skills and training? Are there tasks which the physician should assign to an aide in order to give him more time to see patients? These are some of the questions which are answered in a study conducted last year to determine the ideal knowledges, skills and personal qualities of medical secretaries. Conclusions were based on mail-questionnaire information supplied by approximately 500 top-notch medical secretaries and on personal interviews with physicians and business educators. The study was conducted by Harold Mickelson, Northeast Missouri State Teachers College, in cooperation with the American Medical Association. Mickelson completed the study in connection with his work toward a Doctor of Education degree at Indiana University.

Mickelson analyzed those activities performed in physicians' offices, classifying them into three categories: (1) highly technical medical activities which under normal conditions only a physician can perform; (2) semitechnical medical activities which may be performed satisfactorily by medical office personnel under the supervision of the physician, and (3) business office activities of a routine or management nature which are ideally performed by the secretary or aide.

Mickelson concludes that "physicians are not making maximum use of their extensive training when they unnecessarily perform semitechnical medical and business activities." To help physicians determine what responsibilities can be properly delegated to office personnel, Mickelson is currently preparing a system for assigning duties which will be furnished by AMA to medical societies.

A highly competent secretary, he believes, can relieve a physician of performance of all or nearly all business—office and semitechnical medical

activities connected with his practice. The physician, however, still remains responsible for supervision of these activities.

Physicians interviewed agree with Mickelson. One doctor expressed the opinion that "there is almost no ceiling to the responsibility that an outstanding secretary can take over for a physician." Another said: "There is no practical way to practice medicine today without a medical secretary." The consensus was that it is penny-wise and pound-foolish to employ an incompetent aide.

Where can girls get proper medical secretarial training? What kind of schools should offer training to medical aides? Mickelson believes training should be at the post-high-school level and that a four-year college-degree training program is preferable to a shorter course.

According to Mickelson, only schools with strong business training and strong science departments can offer the kinds of courses and the quality of training that is desirable. His recommendations for course content include development of high-level competency in all generally accepted secretarial skills, business office activities peculiar to the medical office, and all semitechnical activities ordinarily performed by physicians' employees. Semitechnical activities are those related to the examination or treatment of patients, weighing patients, taking temperatures and blood pressures, assisting with minor office surgery or treatment procedures, giving certain types of injections, sterilizing instruments, and conducting some laboratory tests, such as urinalysis and simple blood tests.

Students also must develop certain personal qualities important to their particular job success. These personal qualities were listed by physicians in interviews and are considered necessary in the good medical secretary or aide. They include: pleasantness, neatness, ability to get along with people, ability to use the telephone effectively, intelligence, politeness, ability to keep secrets, interest in and feeling for people, initiative, honesty, enthusiasm, interest in medical work, loyalty, cooperation, conservatism, pleasant voice, self-confidence, ability to make decisions, ability to in-

still confidence, willingness to continue to learn on the job, dependability, patience, aggressiveness (must not be shy), accuracy, memory, maturity, and a sense of humor.

On the basis of the survey, a number of steps which medical associations and medical secretary-assistants groups can take to help provide a greater force of better-trained aides in the future are suggested:

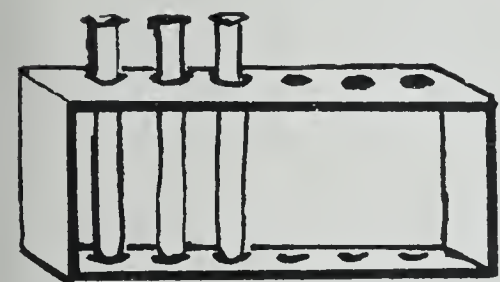
1. Encourage schools with the necessary personnel and facilities to offer high-quality medical secretarial training.

2. Recruit high school graduates for high-quality medical secretarial training.

3. Organize or assist in organizing refresher courses in medical office administration for the employed medical secretary and assistant.

4. Persuade individuals currently employed as medical secretaries to increase their effectiveness on their jobs through additional training in school and/or on the job.

5. Point out to physicians the importance of employing well-qualified medical secretaries and remunerating them adequately.



STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.

State Health Officer

SUMMER HEALTH HAZARDS

That part of the year from June through August and often on into September has been referred to in poetry and song as the "good old summertime." These are the months when people engage in a variety of outdoor sports, when they are vacation-bound to mountain or sea resort areas, or when they otherwise spend many leisure hours outside their homes.

There is no mystery to why these days came to be regarded so favorably. People were and are benefited by the sun's health-giving rays. They were and are benefited by a certain amount of the extra exercise. Vital statistics in Alabama and elsewhere show beyond any doubt that summer is less hazardous from a health standpoint than the winter's wet, cold weather. For the nation as a whole, death rates in July and August are usually about 8.5 per 100,000 population as compared to about 10 per 100,000 in the winter.

However, summer is not what is commonly called an "unmixed blessing," and the State Health Department is interested in helping more Alabamians to become aware of the fact. There are several minor and a few major hazards associated with the summertime. But some of these need not become problems at all, if sufficient precautions are taken against them.

Fortunately, we can look forward to hot weather today with far greater anticipation than our parents, let alone theirs, could in earlier years. For many of the major diseases which were prevalent

during warm weather are practically nonexistent now. Not so many years ago in Alabama, summer was also "typhoid fever season." But the maintenance of safe public water and milk supplies, the protection of many private ones, and immunization with typhoid vaccine have curbed this disease menace for the most part. The summer, also, has been associated with poliomyelitis. But here, again, when the protection of the vaccine now available is extended to a sufficiently large number of people, polio, too, we hope, may be added to the list of diseases which no longer occur frequently during the summer months.

Summer health hazards today, then, may be considered more or less minor in nature. Among the more annoying ones are poison ivy or oak and sunburn. So much discomfort is caused by these and some others that a doctor writing in a recent issue of *The New York Times* could well add some descriptive adjectives to June and the weeks that follow. His name for this period was "the good, old, itching, blistering summertime."

That is, the summer may be "itching and blistering" from poison ivy and sunburn unless certain precautions are taken to ward off their attacks. Such precautions are based on a knowledge of the nature of these health hazards.

First, let's consider some facts about the sun's rays and their effects on the human body. The sun's light and heat rays are not the ones which produce sunburn, or what one doctor has called the "broiling of the skin" and the resulting pain. Rather, it is the invisible portion of the rays—the long and short waves of ultraviolet radiation.

One effect of ultraviolet radiation is the activation of a substance in the skin to produce vitamin

D. This vitamin is needed by the body to promote bone formation. When it is not present in sufficient quantities, a vitamin deficiency disease called rickets results. The sun's ultraviolet rays, however, are not the only source of vitamin D. It can be obtained from butter, milk, eggs, cod liver oil and various vitamin preparations.

As we have indicated, however, not only does ultraviolet have the beneficial effect of initiating the production of vitamin D. It may broil the skin, as well, if the body is the target of the rays for too long a time.

The shorter ultraviolet waves penetrate the top or outer layer of skin, and are absorbed. At first, the affected skin may feel extraordinarily warm. This is the beginning of sunburn, but not tanning. The cells of the skin are injured by this absorption of the short ultraviolet waves. Following the injury, the cells release a substance, which, in turn, causes a swelling in the skin's tiny blood vessels. And it is these swollen vessels which account for the skin's pinkish appearance, and even greater redness as exposure to the sun continues.

At this point, the individual may experience a sensation of burning, pain on motion and much tenderness of the exposed skin. In addition, part of the epidermis or outer skin layer separates from the next and forms blisters. When these blisters collapse, the skin is shed in flakes. Also, an itching sensation occurs, whereupon scratching may mean that a secondary infection has a chance to gain a foothold.

Meanwhile, the longer ultraviolet waves reach deep down to the bottom layer of the outer skin. There, they cause the melanin or pigment of the skin to move to the body's surface. At the same time, the pigment darkens and explains the skin's tanned appearance, or a suntan.

The discomfort of sunburn may last for only three or four days, the redness may disappear and a tan skin may take its place. This may be the course of a mild case. However, a more severe burn may have graver results. Sunburn, for example, may accelerate the course of one or two rare diseases. Moreover, some reports indicate that too much sun over a long period of time may act to provoke the development of skin cancer. This disease has been found to occur more often in people who work under the sun continuously.

While a moderate exposure to sunlight may be and often is associated with health, there are no such beneficial results from sunburn. However, what one doctor calls an illusion is that the appearance of tan is a sign of well-being. Obviously, this is the illusion created in the minds of many persons, who persist summer after summer in attempting to obtain a suntan in only a few days time. However, in the opinion of that doctor we

mentioned earlier, tan is simply a fleeting and temporary sign of being in the outdoors for a time. And as such, he says, the suntan of itself has no particular merit.

Still another illusion regarding the sun's effects is that an individual, to be burned, must be in direct sunlight. As a matter of fact, the intensity of the sun's burning rays may be doubled by reflection, from water or white sand. Thus, a person may be sunburned on a cloudy, overcast day, or under such shelters as a beach umbrella, because of reflected rays.

Many oil and other preparations are highly recommended for the prevention of sunburn. However, the best prevention of all does not receive the attention it undoubtedly deserves. That is graduation of the length of exposure to the sun. In this way, the skin produces its own "umbrella" to potentially harmful ultraviolet waves.

A few minutes, usually 10, is recommended for a single exposure at the beginning of summer. From this point, the length of exposure can be increased gradually. It is better to avoid excessive exposure even later, however, to midday sun and during the hours from 10 in the morning to 3 in the afternoon.

As for the various advertised sunburn preparations, the value of all them is relative. First of all, many of them are applied at the beginning of exposure, and then are laid aside. Thus, the individual may soon lose any protection the preparation afforded, because many such substances wash off easily, from bathing and even from perspiration. One substance reportedly developed and used by the Air Force during World War II was said to be very effective indeed in screening out harmful sun rays. However, many sunbathers might not wish to use it, as it was also reported to be unsightly and difficult to remove.

The eyes, as well as the skin, need protection from the sun. A reliable pair of sunglasses, which successfully screen out some of the ultraviolet waves, should be chosen and worn in the bright sun. In addition, sunbathers may wish to give their eyes extra protection, by covering them with cotton pads.

The individual, then, can enjoy the sun and, at the same time, protect himself against too great exposure to it. If the proper precautions are not taken, however, and sunburn does occur, mild cases may be treated with applications of cool, wet boric acid dressings to the affected skin, or other measures. The individual with a severe case, where pain is a major symptom, should of course consult a doctor for treatment.

What about the annoying irritation of poison ivy or oak? What can be done about this summertime hazard? The most important thing, first

of all, is learning to recognize these plant hazards. Next, they should be avoided. Then, if they begin growing near your home where the possibilities for contact are frequent, they should be destroyed.

The National Safety Council lists four such plants which have a toxic effect on contact with the individual. These are oakleaf, poison ivy, poison oak, western poison oak and poison sumac.

Most or all of these are members of the same family. And all but one—poison sumac—have a distinguishing feature in common. They grow in clusters of three leaflets. The sumac, on the other hand, has several leaves on either side of a central stem. Both poison oak and poison ivy may grow either as vines or as bushes. Moreover, they usually grow among other plants, shrubs, or on trees. Other favorite growing places are fence posts and the ground.

While the edges of the ivy or oak leaves may be smooth, they usually have several small “notches” or “teeth.” The greenish-white flowers bloom during May and June, and all during the summer the leaves remain green. Then in the fall, they turn a reddish color. Also at that time, clusters of white berries grow on the plants. The ivy berry is about the size of a raisin.

All that needs to happen for poison ivy infection to develop is mere contact with any part of the plant—the leaves, the stem or even the roots. The plant touches the individual, and leaves a very thin film of oil. This oil contains a substance called urushiol, which is toxic to the human being.

It is difficult if not impossible to see this toxic oil. Moreover, it can remain on clothes for months and still be strong enough to give the wearer poison ivy. Or the individual may get poison ivy by touching a shoe which earlier touched the plant.

Here's what might be called the typical course of poison ivy: the individual may break out within 24 to 48 hours after contact with the plant. Next, the skin reddens and starts to itch. Then, blisters may appear in a few days. While these blisters may begin healing within two weeks, it may be almost a month before the skin returns to normal.

There are said to be about 75 remedies which are sold either to prevent poison ivy or to relieve the itching and blisters. The newer ones among these, which are designed to neutralize the toxic agent, are reported to be more effective than some older products. Certainly, some home remedies have no basis in fact. One custom recommends building an immunity by chewing leaves of the ivy plant. However, such a practice may result in a serious case of internal ivy poisoning. The hope of the future is that a vaccine can be perfected for those who live near or for those who vacation in the mountains and the woods.

It is a good idea to get rid of poison ivy plants around homes. However the plants should not be burned, as reports indicate that even smoke can carry some of the poison to individuals! Commercial brush killers are available at the nearest hardware or drug store. The chemical should be applied to the lower part of the plant during the fall or early spring.

The individual can outsmart both summer sun and the poison ivy hazard by learning the potential dangers of both, and by receiving competent medical care when either gives major trouble in spite of reasonable precautions taken.

A CORRECTION

In the report of the Association's Committee on Maternal and Child Health for 1956, appearing on page 338 of the June Journal, the statement is made that “It is our understanding that only four counties in the state have such clinics (prenatal) at this time.” The Director of the State Department of Health's Bureau of Maternal and Child Health has supplied a correction, as follows: “Prenatal clinics are established and in active operation in forty-eight of Alabama's counties.”

Population's Natural Immunity to Polio Increasing— Natural immunity to polio among the general population has been steadily increasing since 1915, according to two New York doctors.

Writing in the July 6 Journal of the American Medical Association, Drs. Robert L. Vought and Morris Greenberg said they studied polio death and paralysis rates in New York City from 1915 to 1944.

They found that polio death rates among successive generations of children under 15 years have been reduced 75 to 90 per cent from 1915. Since there were no artificial immunization methods available before 1954, they attributed this drop to increasing natural immunization and better medical care and sanitation.

They predicted on the basis of the 1915-1944 figures a further drop of another 75 to 90 per cent by 1969. And artificial immunization methods such as the Salk vaccine may cause a still greater drop in mortality and paralysis, they said. Even if they do not, the outlook for future generations is “quite encouraging” on the basis of natural immunity.

Natural immunization against polio occurs when the virus is spread from the gastrointestinal or respiratory tract of patients or carriers to other persons, who in turn become carriers and usually develop immunity without developing active cases of the disease.

Just how this process works in a population is not completely understood, they said. But it is known that as more people are exposed to the virus, more develop natural immunity and fewer develop actual cases of polio.

Dr. Vought is associate medical director of Bristol Laboratories, Inc., and Dr. Greenberg is public health director of the bureau of preventable diseases, of the New York City Department of Health.

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director

SPECIMENS EXAMINED

April 1957

Examinations for diphtheria bacilli and Vincent's	119
Agglutination tests	679
Typhoid cultures (blood, feces and urine)	565
Brucella cultures	4
Examinations for malaria	54
Examinations for intestinal parasites	2,869
Darkfield examinations	2
Serologic tests for syphilis (blood and spinal fluid)	24,572
Examinations for gonococci	1,398
Examinations for tubercle bacilli	3,671
Examinations for Negri bodies (smears & animal inoculations)	286
Water examinations	1,867
Milk and dairy products examinations	5,042
Miscellaneous examinations	587
Total	41,715

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BUREAU OF PREVENTABLE DISEASES

W. H. Y. SMITH, M. D., Director

CURRENT MORBIDITY STATISTICS

1957

	Mar.	Apr.	E. E.* Apr.
Typhoid and paratyphoid	2	0	5
Undulant fever	0	0	2
Meningitis	24	14	8
Scarlet fever	649	626	33
Whooping cough	24	49	93
Diphtheria	9	4	15
Tetanus	2	1	1
Tuberculosis	186	138	219
Tularemia	4	1	1
Amebic dysentery	5	6	5
Malaria	0	0	1
Influenza	889	1370	981
Smallpox	0	0	0
Measles	2143	1929	500
Poliomyelitis	4	3	3
Encephalitis	1	1	1
Chickenpox	237	260	307
Typhus fever	0	1	3
Mumps	285	218	229
Cancer	1181	1036	342
Pellagra	2	0	1
Pneumonia	289	203	304
Syphilis	90	155	209
Chancroid	7	7	8
Gonorrhea	211	311	395
Rabies—Human cases	0	0	0
Positive animal heads	34	19	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATISTICS
FOR FEBRUARY 1957, AND COMPARATIVE DATA

Live Births, Fetal Deaths, Infant Deaths, and Deaths by Cause	Number Registered During February 1957			Rates* (Annual Basis)		
	Total	White	Non-White	1957	1956	1955
Live births	6387	3872	2515	25.2	25.8	25.8
Deaths	2103	1371	732	8.3	8.1	8.3
Fetal deaths	117	45	72	18.0	19.8	17.6
Infant deaths—						
under one month	134	79	55	21.0	20.0	17.8
under one year	199	108	91	31.2	30.7	30.1
Causes of Death						
Tuberculosis, 001-019	25	12	13	9.8	13.1	11.7
Syphilis, 020, 029	8	2	6	3.2	1.2	2.8
Dysentery, 045-048					0.4	
Diphtheria, 055					0.8	0.4
Whooping cough, 056						1.2
Meningococcal infections, 057	1		1	0.4		1.2
Poliomyelitis, 080, 081						
Measles, 085	2	1	1	0.8		0.4
Malignant neoplasms, 140-205	270	194	76	106.4	102.9	95.3
Diabetes mellitus, 260	26	18	8	10.2	9.2	10.9
Pellagra, 281						
Vascular lesions of central nervous system, 330-334	277	182	95	109.1	104.5	113.1
Rheumatic fever, 400-402					2.7	2.4
Diseases of the heart, 410-443	702	498	204	276.6	267.1	284.0
Hypertension with heart disease, 440-443	127	69	58	50.0	52.4	62.4
Diseases of the arteries, 450-456	41	26	15	16.2	21.6	16.5
Influenza, 480-483	13	9	4	5.1	5.0	15.7
Pneumonia, all forms, 490-493	65	34	31	25.6	27.4	38.6
Bronchitis, 500-502	3	2	1	1.2	2.3	2.0
Appendicitis, 550-553	2	1	1	0.3	0.8	1.2
Intestinal obstruction and hernia, 560, 561, 570	16	8	8	6.3	1.9	2.8
Gastro-enteritis and colitis, under 2, 571.0, 764	14	9	5	5.5	3.5	2.8
Cirrhosis of liver, 581	9	9		3.5	4.2	4.4
Diseases of pregnancy and childbirth, 640-689	5		5	7.7	10.3	4.6
Congenital malformations, 750-759	27	21	6	4.2	2.7	4.2
Accidents, total, 800-962	158	104	54	62.2	52.8	58.3
Motor vehicle accidents, 810-835, 960	68	51	17	26.8	25.4	22.1
All other defined causes	356	206	150	140.3	147.2	157.3
Ill-defined and unknown causes, 780-793, 795	83	35	48	32.7	30.1	41.8

*Rates: Birth and death—per 1,000 population; Infant deaths—per 1,000 live births; Fetal deaths—per 1,000 deliveries; Maternal deaths—per 10,000 deliveries; Deaths from specified causes—per 100,000 population.

Endorse Principle of Periodic Health Appraisal for Children—A new program endorsing periodic health appraisal for children sponsored by the National Congress of Parents and Teachers has won support of the AMA's Council on Medical Service. At a recent meeting, the Council voted to approve the following resolution: "The Committee on Maternal and Child Care of the Council on Medical Service, AMA, reaffirms its approval of the principle of continuous health supervision of children from birth through their school experience rather than only a program of a single appraisal on school entrance. It also recommends that, where possible, this should be done by the physician and dentist who normally serve that child and family, preferably his personal physician and dentist. The Committee welcomes the support of the National Congress of Parents and Teachers."

AMERICAN MEDICAL ASSOCIATION NEWS

A. M. A. ANNOUNCES TWO CHANGES IN ADMINISTRATIVE SETUP

The American Medical Association has announced two important changes in its administrative setup.

The Board of Trustees elevated Dr. George F. Lull of 942 Lake Shore Drive, Chicago, who has been secretary-general manager of the Association for 11 years, to the newly-created position of assistant to the president of the A. M. A. He will continue serving as secretary, which is an elective office.

At the same time, the Board announced the appointment of Dr. F. J. L. Blasingame of Wharton, Texas, to the position of general manager of the American Medical Association. He will take over his new duties on January 1, 1958.

Dr. Blasingame, who is 50, has been active in medical affairs, both at the state and national level, for many years. When the A. M. A. House of Delegates elected him as a member of the Board of Trustees in 1949 he was one of the youngest physicians ever chosen. Since then, he has held many important A. M. A. committee appointments.

He served as president of the Texas State Medical Association in 1955.

Teaching and medical education have always been close to his heart. After graduating from the University of Texas Medical School at Galveston in 1928, he spent three years as a teacher on the medical school staff. Ever since then he has maintained a teaching connection at the University of Texas.

Dr. Edwin S. Hamilton, Kankakee, Ill., chairman of the A. M. A. Board of Trustees, said that "the 164,000 members of the American Medical Association are fortunate in obtaining the services of Dr. Blasingame. He is young, highly experienced, and he is making the change at a great sacrifice to himself."

Dr. Hamilton, in announcing the appointment, said that "Dr. Blasingame is dedicated to the principles of good medical care for all of the American people. He possesses all the essentials of leadership, plus knowledge, imagination and sound thinking. His work on behalf of medicine through the years has shown that he has the courage and initiative to shoulder responsibility."

DR. LULL TO ASSIST PRESIDENT

In his new job, Dr. Lull will relieve the president of the Association of many of the burdens of this office, which have become especially heavy in the last few years.

Dr. Hamilton said that "Dr. Lull will serve as spokesman, trouble-shooter, listening post, infor-

mation center and as an ambassador of the medical profession in cities and towns throughout the country. His experience is invaluable, and it will be applied in solving medical problems at the state and local level, as well as nationally."

Dr. Lull, who is 70, joined the A. M. A. staff after serving 34 years in the Army. He entered the Army in 1912 as first lieutenant, emerging as major general of the Army Medical Corps. His last position before retirement was deputy surgeon general of the Army.

Dr. Lull received many honors in connection with his Army service during both World Wars, including the Distinguished Service Medal. In 1951, the Cuban government gave him its highest honor—the Order of Carlos Findlay—for his humanitarian work in the field of medicine.

DR. BLASINGAME TO MOVE TO CHICAGO

In discussing his new post, Dr. Blasingame said that he will leave his private practice which he has carried on in the same location for 20 years, and will move his family to Chicago, where the A. M. A. headquarters office is located, as soon as possible.

Dr. Blasingame has five children—three daughters, 22, 20 and 13, and two sons, 17 and 10.

His 20-year-old daughter, Betty, will soon enter the University of Texas Medical School; his 17-year-old son, John Chester, is a premedical student at the University of Texas in Austin.

Dr. Blasingame has long been active in civic affairs, not only in his home town but throughout Texas.

He is president of Blue Cross-Blue Shield Plans of Texas; he is chairman of the Board of Trustees of Wharton County Junior College, and he is also chairman of the medical advisory board of Sears, Roebuck Foundation, which encourages young doctors to create new medical facilities where they are needed.

Dr. Blasingame's many activities took him away from home 128 days last year, and he travelled more than 60,000 miles, mostly by air.

Physicians who know him well say that he possesses a preciseness of manner and a diplomatic polish that compliment each other in both his role as a practicing physician and as a spokesman for his colleagues in state, national and international groups. He has represented the A. M. A. at several world conferences of the World Medical Association abroad.

SWIMMERS SHOULD HAVE EAR WAX REMOVED

Wax in a swimmer's ears—particularly in only one ear—may lead to serious or even dangerous

consequences, according to a Philadelphia otolaryngologist.

Dr. Albert P. Selzer said that dizziness sometimes occurs when a person swims in cold water which enters his ears and causes abnormal activity in the ears' labyrinths where the sense of equilibrium is controlled.

The dizziness may lead to an inability to tell the position of the body, panic, or even drowning, he said in the May Archives of Otolaryngology, published by the American Medical Association.

Dizziness is especially likely to occur when only one ear is clogged with wax, he said. Cold water cannot reach that ear's labyrinth, but does reach the labyrinth of the unclogged ear. This sets up two different unbalanced reactions and produces dizziness and inability to tell body position.

In a person with wax in both ears or in neither ear, the labyrinths' reactions to cold water are the same and there is no dizziness.

Dr. Selzer pointed out that dizziness resulting from wax in only one ear is not confined to swimmers. It may also occur when cold air reaches the labyrinth of only one ear.

Dr. Selzer is assistant professor of otolaryngology at the University of Pennsylvania Graduate School of Medicine.

ALCOHOLISM INFLUENCED BY SOCIAL BACKGROUND

Whether an emotionally maladjusted person becomes an alcoholic depends a great deal on his social and cultural background, the director of the Yale Center of Alcoholic Studies said recently.

Selden D. Bacon, Ph. D., New Haven, Conn., said that psychological factors play a large role in the development of alcoholism, but they cannot be considered as the only cause. They must be considered in respect to the person's society.

Some societies are so constructed that a person with emotional difficulties is not likely to turn into an alcoholic. Instead, he finds some other way to meet his neurotic needs.

Dr. Bacon, who is professor of sociology at Yale University and chairman of the Connecticut Commission on Alcoholism, discussed the sociological aspects of alcoholism in the May 11 Journal of the American Medical Association. His article is the last of a series prepared by the A. M. A. committee on alcoholism.

He gave four highly-simplified examples of societies and their effect on the development of alcoholism.

Among Orthodox Jews, the social functions of drinking are strikingly clear. There is no great emotional feeling about drinking, although it has definite family and religious significance. Emotional maladjustments are as common as in any other segment of American society, and all members of the group drink frequently. Yet alcoholism

is practically unknown.

It is highly unlikely that an Orthodox Jew would turn to alcoholism as a solution to his emotional problems, because of his "well-instilled belief in the symbolic and sacred character of using alcohol." He would more likely turn to excessive work, gambling, or some other outlet.

Alcoholism is "certainly not rare" among white, middle-class Protestant persons of northern European background, living in the northeastern cities. For this group, the social functions of drinking are "rather vaguely and somewhat defensively described." The rules and procedures show enormous variability, so that a person may follow one set of rules with his family and another with business associates.

The custom is not significantly related to family or religious institutions and there is great emotional feeling about the problem on the mass level as well as by individuals. Emotional and psychological disturbances are probably not exceptionally high, yet from three to seven of every 100 users are alcoholics, Dr. Bacon said.

Among American Mormons, the social function of drinking is officially stated to be nonexistent and if it does occur, it is held to be disruptive, deteriorating, and disgusting. Drinking can be considered only as a deviation from the group. Among those who do drink, the rules and procedures are borrowed from other cultural groups. The incidence of alcoholism among the whole group is very low, but the incidence among those who do drink at all is very high.

In a primitive South American society, drinking is so much a part of the life, and its social function so well understood, members would have difficulty explaining it, just as Americans would in attempting to explain the social function of eating.

The custom is learned from childhood and is almost inextricably entwined with major ways of life and social institutions. Apparently everyone drinks, and drinking to the point of intoxication is a common practice. However, alcoholism is unknown. In fact, the language has no word for such a condition.

Considered sociologically, alcoholism is a "behavior phenomenon" and must be described in terms of specific behaviors of the alcoholic and the way they differ from the "normal" behavior of the non-alcoholic members of the group, Dr. Bacon said. Thus, in treating an alcoholic, it helps to understand the society and its impact upon the patient and his emotions.

He also noted that the sociological approach to alcoholism may provide answers which cannot be found by the physiological, psychological, and pharmacological approaches alone, such as the reason for the differences in the alcoholism rates among the different social and cultural groups.

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THE DOCTOR AS A COMMUNITY CITIZEN

ONE BANKER'S VIEW

J. FINLEY McRAE

President, Merchants National Bank

Mobile, Alabama

Addressing a group such as this, distinguished by scholarship and usefulness to society, is at once a real privilege and a challenge. Throughout preparation for my remarks I found it hard to arrest chasing thoughts that might be worthy of your attention, and difficulty in tying them down to language appropriate to the occasion.

It would have been relatively easy to prepare an address on your service to humanity, for then I would deal with an obvious truth, with plentiful supporting evidence.

I was told you would not want to hear compliments, and was asked to try to give a constructive talk on the role of doctors as citizens. Frankly, I was more than a little reluctant to take the subject, because throughout the address there lurks danger of implying that I do not consider doctors good citizens. Certainly that is not true. It would be insincere and foolish of me, and grossly unfair to you, to say or imply that men and women who work for human happiness through the relief of suffering are not uniquely valuable citizens.

Recently I came across a quotation from a book by Dr. Albert Schweitzer. Some of you may have seen it; it was in a popular magazine. I shall use the quotation, because it refers to the ethic of reverence for life, which is, unquestionably, a strong motivation in your own lives, and because it will help clarify my position.

Dr. Schweitzer said:

"The ethic of reverence for life requires that in some way or other and in something or other we should all live as men for men. To those who have no opportunity for human relations in their ordinary work, and who have nothing else to give, it suggests that they should sacrifice some of their own time and leisure even when they have but

very little of either. Take up some side line, it says to them, some quite insignificant, perhaps even secret, side line. Open your eyes and look for some man, or some work for the sake of men, which needs a little time, a little friendship, a little sociability, a little human toil. Perhaps it is a lonely person, or an embittered person, or an invalid, or some unfortunate inefficient, to whom you can be something. It may be an old man, or it may be a child. Or some good work is in want of volunteers who will devote a free evening to it or will run errands for it. Who can reckon up all the ways in which that priceless fund of impulse—man—is capable of exploitation! He is needed in every nook and corner. Therefore search and see if there is not some place where you can invest your humanity."

That quotation is an appeal which you answer in the practice of your profession every day. But, in addressing you, I go further in stating that, although you give a great deal in your ordinary work, good citizenship requires that you search for other opportunities where you may invest your humanity, or at least take on some of them that arise. In so doing, you, your profession and, more important, your community will benefit.

There are two phases of citizenship: responsibility and opportunity. Responsibilities are primarily, I believe, intelligent exercise of the right to vote with all that that implies, payment of taxes, and military service when it is required. Opportunities are manifold. They lie everywhere, anywhere the possibilities of community service have not been exhausted. I have worked for a bank in Mobile, the same bank, for forty two years, and believe I may have been in better than average position to observe the good done in this community by unselfish men and women who have not turned away from citizenship opportunities that they could reasonably embrace, even at

Delivered before the Association in annual session, Mobile, April 19, 1957.

some sacrifice.

Parenthetically it can be said that too many confuse inconvenience with sacrifice. Those who serve society beyond the performance of their ordinary duties contribute more than can be measured to richer, happier lives for so many others. Certainly there are many doctors in that number, but I regard it as real misfortune that there are not more, for with their highly trained intelligence, undoubted influence, and demonstrated competence they have so much to give.

Our societal structure is complex, characterized by interlocking dependencies arising from specialization of abilities. We need each other. On the broad scale, a strong economy depends upon the good health of its many vital segments. On the individual level, each of us in our work and in our private lives is dependent from minute to minute upon the products made and the services rendered by a host of other people. This is an economic dependency that has drawn us closer together as a people. Concurrent with its development there has been a growth of dependency upon each other for social progress. Economics cannot be divorced from human progress, but it is concerned with material things, the creation and distribution of wealth, and considers people first as to their material needs and desires. Social progress, on the other hand, cannot be separated from economics either, but it is concerned primarily with a spiritual thing—human happiness—and considers people first as to their spiritual needs and desires. Good citizenship springs from an idea formed by fusion of the two concepts, the idea that people are both material and spiritual. The idea may be hazy, poorly formed, and uninspected, but in the good citizen it is there. Overlaid with belief in God it influences his conduct at work, and persuades him to sacrifices of money and leisure to extend and increase the richness of our way of life. Therein lies the doctor's opportunity, for democracy thrives as an association of all of us under leadership of the best. As more active citizens, you, who are in the top stratum of the best, would assume a higher degree of community leadership that would be of widespread benefit. With rather substantial pressure on me that I don't seem smart enough to relieve, I have sometimes wondered with some seriousness whether my obligations of citizenship cannot be fully discharged by trying to be the best and most constructive banker within my capacity, and let it go at that. I have never been able to salve my conscience to the point of permitting that attitude to take any firm hold, and, for example, that is why I am before you today. You would probably under-guess by far the number of hours I put into preparation for this appearance, trying to develop what might be worth your while in listening. In work-

ing on this talk my concern mounted as I realized that all of you would probably not like all I would feel impelled to say in justice to the subject assigned me. Please know that my expressions are wholly sincere, and offered with genuine respect and especially high regard for this particular audience. I can easily appreciate that the extent of unrelenting pressure on many doctors is far greater than any to which I can be subject, and only individual conscience can appropriately govern individual attitudes. It can only be hoped that all consciences will be active. If any are stimulated by this address my place on the program will have had some justification.

I am quite aware that what I have had to say so far has been full of abstractions, but they are pretty hard to avoid in discussing an abstract subject. A few years ago I was called on to address a group in Mobile on the "Character of Good Citizenship." In approaching that assignment, as with this one, I could not help but recall with keen sympathy a recurring problem of early school days, when students were told to turn in the proverbial essay on "Friendship." In that address I tried to pin down and define my conception of a good citizen. I did not have doctors specifically in mind then, of course, but what I said would apply to doctors as well as any other group, for doctors, although they are above the average run of men in intelligence, preparation and usefulness, are not so different as to be barred from the opportunities of well-rounded citizenship. That impels me to quote my attempt at outlining the characteristics of a good citizen. In doing so I repeat my recognition expressed then that no individual has ever been such a paragon as to possess all the virtues and be devoid of all the sins of citizenship that I shall mention. At the same time I believe that every positive attribute of good citizenship described has been personified in one or more of the great citizens of Mobile in my time, and most of them in many.

In the first place a good citizen is inherently unselfish. It has been eloquently said that the usefulness of an individual is practically unlimited if he doesn't care who gets the credit. Fundamentally, he is uncompromisingly, even militantly honest, with clear-cut convictions as to right and wrong. He conceives that it is possible to be canny and shrewd, without being unscrupulous. He doesn't think that smart and sharp are the same thing. His interests manifest keen concern for his nation, his community, his line of business or professional activity, and his fellow men. He respects the rights and privileges of others. He believes in and maintains a chivalrous attitude. He believes that all duties merge into that of fair dealing, and that there is no way to humanize ruthlessness or lack of consideration for others;

that his obligation is to detract not one whit from the sum total of human happiness, but to add to it if possible. He has a pronounced sense of social responsibility. He has implicit faith in the efficacy of free enterprise—unfettered free enterprise, if you please. He wants his community to do for itself without dependence on the great white father of federal government at the expense of the nation's tax payers as a whole. He approaches the resolution of difference of views involving soundness and honesty with a spirit of settling peacefully, if he may, courageously if he must. He possesses an eternal inquisitiveness, a thirst for knowledge, a passion for facts, urgency of purpose, and tenacity toward a goal. To him sustained effort is joyous hard work. The forty-hour week is for others; for his employees, if he is head of a business, but not for him. His resourcefulness and unwillingness to give up have their background in his acceptance of the theory that most problems which appear difficult and perhaps unsolvable can be worked down to something understandable. He follows one furrow to the end. He has an abiding belief that everything, even money, is important in the final analysis only as it contributes to the chance for happiness, either his own or of others. If he has substantial means, and certainly that is not a requisite of good citizenship, he recognizes that wealth carries responsibility with it. Beyond its function in supporting livelihood and creature comforts in the present and security for himself and loved ones in the future, he regards money as a tool. He considers himself as a trustee, so to speak, obligated to use his wealth, not in hoarding it unproductively but in employing it constructively. He is liberal and philanthropic in his disposition toward contributions for charitable and civic causes. He is careful, but c o u r a g e o u s and far-sighted, in using money for business investment. Impelled by profit incentive, yes—but he is at the same time wisely aware that only successful investment can provide new or enlarged plant and business equipment, better products and values for the buying public, and enhanced opportunity for gainful and dependable employment. That is one prime way of promoting the happiness and well being of others. His experience has brought the discovery that enterprises and projects do not fail; that the people who operate or are responsible for them fail.

The good citizen may have small means, and most are in that category. He may not have a college or university education, but believes that it would have improved his ability to be useful and increased his capacity to appreciate the finer things of life, and he hopes and plans that his children can have educational advantages which were perhaps denied to him. He appreciates that a sine qua non of good citizenship is accomplish-

ment according to individual capacity and opportunity in his own line of activity, and that he may not devote so much time to civic pursuits that his business or job is endangered, lest his failure there destroy his influence and preclude family and citizenship success. He has a sense of balance, and knowledge that effort for community good must come on top of the requirements of his individual business or professional sphere. He has become conscious that the route of good citizenship is not a scenic highway, but he is willing to pay the price. It is probable that in his boyhood or early manhood he had little perception of developing a foundation for a philosophy of living, but somehow and somewhere inside his impulses and resolves were quickened by an unvoiced and perhaps unrecognized hope that when he passed on the world would be a little better because he had lived in it.

The good citizen is free from the deadly sins of citizenship, important among which are physical and mental laziness, lack of humility, greed, cowardice, cynicism, and false pride. He does not measure success solely by a standard of worldly goods owned. He realizes that preachers, teachers, social workers, musicians, artists, medical and scientific researchers, and others whose material holdings may be negligible, can be greater successes in the broad, general scheme of things than a so-called business giant. Finally, while he may not be an active church worker or too regular an attendant at church services, as important as that is, the good citizen is a Christian. Though it may be unexpressed, he carries a consciousness that life itself and accomplishment within it are subject to the will and judgment of an omnipotent being. He appreciates that the road we travel so briskly leads out of dim antiquity; that the present is but a fleeting moment, and that the future, according to the grace of our maker, is in our hands. The good citizen, who is a doctor, practices medicine in the true spirit of his Hippocratic oath, regarding his work above all as service to humanity, and secondarily as activity from which he derives income. He abides scrupulously by his profession's code of ethics. He gives as generously as means, income and good judgment permit to worthy welfare and civic causes. And he gives some of his time, although he may have little leisure, to help some institution or some work, either in or out of his professional sphere, that benefits his community at large. The automatic effect of doing these things is leadership in community affairs. Leadership has its penalties. It also has its rewards. Good citizens, who are doctors, earn for their profession immeasurable good will which could be important in fending off socialized medicine, for example, and they earn for themselves great personal satisfaction. As many of you know,

it is worth the effort and the sacrifice involved.

Allow me to express an opinion which many of you may not like, but which I hope will be accepted as sincere and intended to be constructive. Certainly it does not apply to all of you, but to me it appears regrettably true that most doctors contribute too meagerly in proportion to means and income circumstances to broad community causes such as represented by the community chest or united fund, for example. In saying that, I do not question the appropriateness and justice of the consideration that their average life expectancy is less than for most other groups, that income can be interrupted and perhaps seriously affected permanently by physical incapacity, and that you are not covered by anybody's pension or retirement plan. Prudence dictates that this should be weighed in your decisions on giving. Another defense, which I don't think is nearly so valid, is that you do so much charity practice. All honor to you for that, but is not part of it inescapable in the opportunity and privilege of practicing in any community? Then too, subscriptions to a community chest or united fund, for example, are only partly for charitable purposes. Financial support of the YMCA, YWCA, Catholic Youth Organizations, Boy Scouts and Girl Scouts is investment in future citizenship that can produce real returns for you and your families. If you think that your charity practice takes full, honest care of your citizenship obligation to participate in the absolutely necessary support of charitable causes, it is usually possible to earmark your subscriptions for other specific activities that may have special appeal to you. Many thousands of people throughout the country work unselfishly on drives for broad community causes wrapped up with genuine devotion to the needs covered. I have expressed myself at meetings of boards of directors in which I sit that contributions to broad community causes not only answer an obligation that rests on the corporate citizen just as on the individual but represents also the best public relations money the corporation can spend. I hope that the medical profession never faces a threat serious enough to make general public support really vital, because I don't want my children and their progeny dependent upon regimented doctors. Perhaps I labor the point, but I really believe it merits some consideration. In our system the only force that can ward off or correct unsound, pernicious controls is crystallization of public opinion. Public relations are important to the medical profession too.

My time is growing short, and I have covered my special subject as well as I am able. But before closing I would like to refer specifically to one of the characteristics of citizenship mentioned earlier, and from that divert into comments that relate

especially to my banking experience. Earlier I said the good citizen is prudent in using money for business investment, aware that, in addition to producing dependable outside income for himself, invested money can also be a tool for the well being of others. A sound investment accomplishes both, that is, it profits the investor as well as a useful business or industrial organization or supports governmental functions. A sound investment program calls for special knowledge and judgment backed by close study and long experience. It has been my observation that, while there are many exceptions, the average doctor is too prone to overlook this and rely on his own unsupported, uninformed judgment in making investments.

In my book the individuals with chance for maximum usefulness in our general scheme of things are well prepared, broad-minded preachers, teachers and doctors, dedicated to their professions. My interest in the medical profession is heightened, if possible, by the fact that my only son will enter medical school this fall. In the magnificence of the role you play and the multitude of your opportunities for satisfying endeavor, I salute you. Thanks for giving me the honor of addressing you.

Brain Goes 19½ Minutes Without Oxygen—The period the brain can safely go without oxygen has been lengthened from the accepted five minutes to nearly 20—at least in one case, it was reported recently.

Four Illinois researchers told of a 24-year-old man whose brain was oxygen-starved for 19½ minutes during heart surgery, but who recovered with no permanent brain damage.

Damage usually occurs when the brain's blood and oxygen supply is cut off for more than five minutes, they said in the August 10 Journal of the American Medical Association.

They attributed the safe recovery to the fact that the brain was "protected" by the effects of chlorpromazine and hypothermia.

The patient was undergoing a complicated operation to repair heart and artery damage resulting from a bullet wound. During the operation he suffered several severe hemorrhages in an artery leading to the brain, including one which kept him in a shock-like state for 19½ minutes.

Electroencephalographic measurements of the brain taken seven days before the operation were normal. During the first part of the operation, the patterns were typical, but when the hemorrhages started, dramatic changes occurred in the patterns. During the 19½-minute hemorrhage, there was a complete absence of electrical activity in the brain's cortex.

This prolonged period without electrical activity in the brain was apparently due to severe oxygen deficiency, resulting from the lack of blood flow into the brain following hemorrhage.

When the doctors noted these changes, they feared the patient would not survive without brain damage. However, later electroencephalograms showed normal brain function.

KEROSENE POISONING IN CHILDREN

A STUDY OF 48 CASES

WILLIAM D. McNALLY, A. B., M. D.

Spring Hill, Alabama

Kerosene poisoning is more frequent in children in the South than any other poison. During 1956 in the Mobile County Hospital there were 83 cases of accidental poisoning. Thirty-one of these were due to kerosene, eleven to salicylates, and the remainder to forty-one different kinds of poison. Bain¹ reports that there are over 400 deaths of children under five years of age from accidental poisoning each year. Petroleum products accounted for more than 25 per cent of the deaths. Thirty-three per cent of the above number were due to aspirin and the salicylates. Taylor and Adams² report 100 cases of poisoning in children in Louisville, Ky., with 18 per cent due to petroleum products. In a previous paper,³ 204 cases were reported with 6 deaths during a ten-year period. Due to the introduction of mineral oil in the treatment of kerosene oil poisoning in 1950, there has been only one death in children in the Mobile County Hospital up to May 1957.

Accidental poisoning of children in Mobile is caused by drugs, chemicals, petroleum products, ammonia, barbiturates, creosol, wood alcohol, turpentine, roach poisons, rat poisons and insecticides like Chlordane (see Table I) carelessly left within the reach of the curious little people.

Table I

83 Accidental Cases of Poisoning in Children in the Mobile County Hospital for 1956

Kerosene (1 death).....	31	Aspirin	9
D. D. T.....	1	Salicylates	2
Lighter Fluid.....	1	Roach Paste.....	3
Furniture Polish.....	5	Rat Poison.....	2
Gasoline	1	Phenobarbital	1
Paint Thinner	1	Dexedrine	1
Mosquito Spray.....	1	Lime	1
Real Kill.....	1	Chlordane	1
Gulf Spray	1	Camphorated Oil.....	2
Lysol	1	Roach Powder.....	3
Ammonia	1	Purex	2
Methyl Alcohol	3	Turpentine (1 death).....	3
Creosol	1	Butisol	1
Isopropyl Alcohol	1	Home Permanent	
Varnish Remover.....	1	Solution	1

The ages varied from 12 months to 5 years; 98 per cent were under two years of age. In 1955 there were 17 cases of kerosene poisoning and in 1956, 31 cases; 92 per cent were colored, with sexes running about equal in number. Only one death occurred in this series, making a mortality rate of

2.08 per cent, which is a very much lower rate than reported by others.

The average hospitalization was five days, ranging from one day to 14 days. The amount taken was never accurately determined. The parents would give the dose as one swallow to a cupful. The fatal dose of kerosene for children has never been determined. As much as a liter has been taken without causing death, but children have died after taking a much smaller amount.⁴ Mortality from ingestion of kerosene has been placed from 6.7 to 11 per cent. In a previous report³ of 204 cases the mortality was 2.8 per cent. Our cases must be seen earlier after the ingestion of the oil, or our method of treatment with mineral oil accounts for the lower mortality. The death in this series occurred within three hours of admission to the hospital.

The cases seen in this hospital do not conform to the three groups as described by Steiner⁵ but are arranged in two groups. The first category is that of acute toxicity and depression of the central nervous system with minimal pulmonary changes. The second group is that of a severe pneumonia, hyperexia and prolonged recovery. Many of these children were returned to the pediatric clinic in one to two weeks without any clinical evidence of ill effects of the kerosene oil. The variations in the clinical picture reported by various authors in the children hospitalized can be best explained by delayed admissions to the emergency room of the hospital rather than by the difference in the chemical composition of the kerosene oil taken. Kerosene is a petroleum distillate of specific gravity 0.807, with a flash point 110°F or higher and burning point upward of 125°F.

As most of the children seen are too young to describe the effects of the kerosene, the physician will note the irritation of the throat and mouth as the outstanding symptom, with a cough and an odor of kerosene in the breath. The children who can talk describe a burning in the mouth, throat and stomach, have a cough, choking spells, vomit, drowsiness, rarely coma, and increased heart and respiratory rates. These patients are released from the hospital within three days. The second group includes those who have ingested larger amounts of the oil or have had a delay from 3 to 7 hours after taking the kerosene before being admitted to the hospital and are released in from ten

1. Bain, Katherine: J. Pediat. 44, 623, 1954.
2. Taylor and Adams: South. M. J. 50, 477, 1957.
3. McNally, Wm. D.: J. Pediat. 48, 296, 1956.

4. McNally, Wm. D.: Medical Jurisprudence and Toxicology, 257, 1939.

5. Steiner, M. M.: Am. J. Dis. Child. 74: 32, 1947.

to fourteen days.

Fifty per cent of the 1955 cases were examined radiologically; in 1956 the number increased to 77.7 per cent. Foley and colleagues⁶ reported radiographic changes present as early as one hour after ingestion of kerosene. One of my cases ingested approximately 2 ounces of kerosene at 10 P. M., was in the emergency room at 10:40 P. M., but failed to show radiographic changes on the third and eighth days after admission. This 18 months old colored child vomited before being admitted to the hospital, had a cough, no abdominal tenderness, but her eyes reacted to light and accommodation. This child on the fifth day had a white blood count of 39,000, with neutrophils 76%, stabs 6%, lymphocytes 15%, and normocytes 3%. (Sickle cell 50% bisulphite.) This is the only instance of the ingestion of kerosene oil that did not show a chemical pneumonitis.

In arriving at a positive diagnosis one should have the chemist's report of the examinations of the stomach lavage. When toxicologist to the Cook County Hospital, Chicago, I seldom obtained enough kerosene from the distillate for chemical examination, but the odor of the distillate was more pronounced than the stomach contents. Only the larger hospitals have personnel qualified for such tests. The history, the odor of the breath, and the radiologic examination are the principal points to be relied upon in the diagnosis of kerosene oil poisoning. Blood examination, while not diagnostic, was made upon all of the patients except the one dying under three hours after admission; this fact gave additional evidence of the seriousness of the poisoning. The hemoglobin ranged from 6.25 grams to 12.5, the R. B. C. 2,640,000 to 6,090,000, the W. B. C. 7,550 to 39,200, with an average of 15,300, 90.5 per cent having counts over 10,000. A typical blood examination is demonstrated in a one year old colored child who drank an unknown amount of kerosene oil: Hb. 9.6 grams, R. B. C. 4,750,000, W. B. C. 23,400, neutrophils 51, stab 1, lymphocytes 43, atypical lymphocytes 4, and monocytes 1. This child had a prolonged stay in the hospital of 14 days.

Gastrointestinal symptoms occurred in 19.0 per cent of the patients, which is much less than reported by others. The explanation for this is that 92 per cent were colored and adequate histories were not obtainable; also this group might have taken a lesser amount of kerosene oil. None of this group had blood streaked vomitus, or occult blood in stool specimen. Six had ova of *Ascaris lumbricoides* in their stools.

Nineteen per cent were lethargic, only one comatose, and central nervous symptoms were more prominent in those with delayed admissions

to the emergency room and children taking the large amounts of kerosene. Listlessness and somnolence were prominent symptoms in those patients with a history of ingesting small amounts of kerosene. The central nervous system caused little clinical concern. The pulmonary damage was the outstanding feature, characterized roentgenologically by the rapid development of a bilateral bronchopneumonia which, in the severe cases, was slow in resolving and receding. The leucocyte count was always high in the severe cases. An autopsy was not performed upon the only fatal case in this series. Other investigators have reported sections of the lungs showing severe necrotizing bronchitis, bronchopneumonia and hyaline membranes in alveoli. The pathologic changes of the other viscera were essentially normal. The follow-up studies in the pediatric clinic did not reveal any residual pulmonary, kidney or heart damage.

The cause of the pulmonary damage following the ingestion of kerosene has been a source of difference of opinion on the part of various authors. In the previous 204 cases reported,³ I believe that the aspiration of kerosene was the chief cause of the rapid development of the chemical pneumonitis. If the hematogenous spread of kerosene had been responsible, there would have been severer central nervous symptoms from absorption by the brain than appeared in this study. This opinion is strengthened by the animal experiments of Richard and Pratt-Thomas⁷ who state that the results, in general, appear to underline the outstanding importance of aspiration and to minimize the role of gastrointestinal absorption. Diechman and associates⁸ submit evidence that injury to the lungs results from absorbed kerosene carried by the blood stream, as well as by aspiration. Some of my cases indicate some absorption by the blood stream from the central nervous symptoms, but the major damage was pulmonary in origin from aspiration. Urinalysis was normal in the majority of cases but showed the presence of reducing substances in 3 cases, albumin in one, and several showed a few red and white blood cells per high power field. Examination of the urine, while it does not have any clinical significance in kerosene oil poisoning, should always be done as a potential diabetic could be found in the group examined.

The fatal case, a colored male child, 12 months old, drank an unknown amount of kerosene at 2:30 P. M., was admitted to the hospital at 5 P. M., and died within three hours. He did not vomit. There was a strong odor of kerosene on the breath. Bronchial rales were present. He was put in an

7. Richardson, J. A., and Pratt-Thomas, H. R.: *Am. J. M. Sc.* 221, 1951.

8. Diechman, W. B.; Kitzmuth, K. V.; Witherup, S., and Joannsmen, Ralph: *Ann. Int. Med.* 21, 803, 1944.

6. Foley, Joseph C.; Dreyer, Nicholas, B.; Soule, A. Bradley, and Woll, Ephrian: *Radiology* 62, 817, 1954.

oxygen inhalator, breathing 40 per minute. The temperature was 100 and pulse 150. No autopsy was performed.

TREATMENT

Since 1950, only one death from kerosene poisoning has occurred in the Mobile County Hospital. The routine treatment⁹ in the emergency room is immediate gastric lavage with 2 ounces of mineral oil. Another ounce is left in the stomach. If the child has vomited or is not drowsy, the lavage is omitted. Every child is given 300,000 units of penicillin when admitted to the ward, and 0.5 cc. of caffeine sodium benzoate is used in all cases of drowsiness or depression. Penicillin is given every four hours until the temperature is normal. In severe cases, where the respiration is labored, the child is given 1½ cc. of Coramine and put under an oxygen tent.

PREVENTION

Every physician has a responsibility and opportunity in the medical care of children to promote a campaign of prevention of all accidental poisoning in the home. The health department of cities and states can carry health education to physicians, demonstrating the hazards of all poisons, and especially kerosene in the South. Then the information acquired from the safety bulletins of health departments can be passed on to parents. The education of parents in accidental poisoning is paramount. All insecticides, pesticides, petroleum products, deodorants, rodenticides, paints and varnish thinners should be kept out of the reach of the curious child. Labels mean nothing to the child under five, so the parents must be impressed with the dangerous aspect of their offspring sampling any drugs or chemicals within their reach. Parents should have every container with drugs or chemicals labeled for their own safety. In a radio address on household poisons, probably the first in the country some 20 years back, I said, "Unlabeled poisons like unloaded guns give no warning of their death-dealing blow until it is too late; guard yourself and family against the former as well as the latter." Education by pamphlets, the press, radio, television and by personal contact will lessen the dangers of all poisons, especially kerosene.

SUMMARY

1. A statistical study of the salient features of 83 cases of kerosene oil poisoning in children is given, with pulmonary involvement as the most serious complication, with the conclusion that lavage with mineral oil should be given to all patients.

2. The medical profession can prevent the dangers of accidental poisoning of children by stressing the dangers of parents carelessly leaving this

poison in handy reach of children. Parents should be just as cautious about kerosene as they are about substances that are known to be toxic. All drugs, chemicals and medicines should be kept out of the sight of these curious little ones, because children under five years of age are especially receptive to eat or drink poisonous substances since they possess mental and physical immaturity and lack of judgment.

3. This study, as well as a former study of 204 cases of kerosene poisoning previously reported,³ emphasizes the gross carelessness of parents in allowing the poison to be obtained so easily. It was found that the kerosene was obtained in beverage bottles, drinking glasses, and cups and cans for starting fires. The public must be impressed with the hazards involved in permitting kerosene to be left in such containers for in unguarded moments young children will attempt to satisfy their curiosity.

"Breast Plasty" Causes Psychic Disturbance—For one woman an operation to enlarge the breasts caused an emotional disturbance at least as great as the one it was supposed to relieve, a Washington, D. C., physician said in the August Archives of Surgery.

The operation, called "breast plasty," builds up "underdeveloped" breasts by implanting plastic sponges behind them. It is sometimes performed for social or economic reasons or for the relief of psychic disturbances, present or potential, presumably caused by having small breasts.

Lieut. Col. Harold F. Hamit (MC), U. S. Army, told of a case which he said indicates that the possibility of later guilt feelings should be added to the list of other known complications which make the operation seem "ill advised."

In this case the left breast developed an open draining sore about a year after a breast plasty had been performed by another doctor. After the sponge was removed by Dr. Hamit, the breast healed.

The patient later had the sponge removed from the right breast because she feared similar complications and difficulty in the breast if she became pregnant. In addition, "mammary prominence no longer appealed to her vanity," he said.

On follow-up visits the patient expressed "vague anxieties and possibly a guilt complex" over having had the plastic sponges implanted. In fact, they were "at least equal in magnitude" to any psychic disturbances she had earlier suffered, he said.

After the sponges were removed (during two hospitalizations and four operations), the woman expressed fears that the plastic material might have increased the chances of cancer. She also wondered if the original operation could have influenced her apparent inability to become pregnant. Dr. Hamit reassured her about both questions, although he pointed out that the cancer-causing properties of plastic implants are "simply unknown."

The indications for and the possible hazards of breast plasty, as well as the cancer-causing abilities of plastics, are rather ill-defined and nebulous in the medical literature, he said. As far as he knows, no case of cancer attributable to implanted plastics has yet been reported in humans. However, studies have indicated that various types of plastics do cause tumors in rats and other animals.

9. McNally, Wm. D.: J. Pediat. 48, 296, 1956.

THE SYLACAUGA, ALABAMA, PLAN FOR THE DELIVERY OF INDIGENT MATERNITY CASES

HAROLD KLINGLER, A. B., M. D.

Diplomate of American Board of Obstetrics and Gynecology

Director, Bureau of Maternal and Child Health

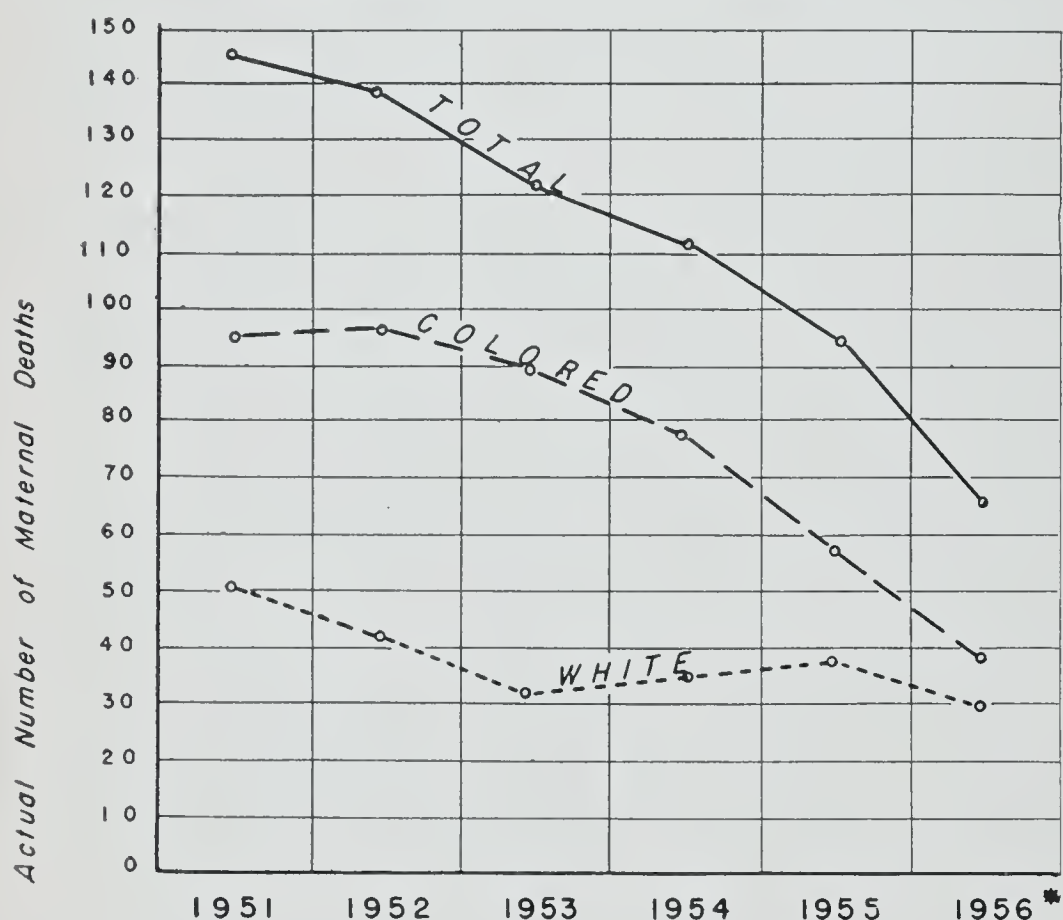
Alabama State Department of Public Health

Montgomery, Alabama

Alabama's maternal mortality rate for 1956, when there were 66 maternal deaths, was the lowest ever recorded. In 1955, there were 93 such deaths. The trend has been steadily downward

CHART I

ALABAMA MATERNAL MORTALITY IN ACTUAL NUMBERS PER YEAR—1951 TO 1956 (INCL.)



Note:

Final tabulations will be made later in year
*1956 figure is provisional.

Above figures were obtained from Department of Vital Statistics
Alabama State Department of Public Health

for the past several years (Chart I). All practitioners, nurses and other personnel who have had any part in the care of obstetrical cases are to be congratulated.

Although our rates are assuming new lows, much remains to be accomplished. Our state maternal mortality rate was 13 per 10,000 births in 1954 and 14 in 1953. The overall mortality average for the entire nation was 6.1 per 10,000 deliveries. Some sections of the country have reported mortality of less than 1 per 10,000. Thus, it is seen that, in spite of the downward trend in Alabama, more maternal deaths can be prevented in this state.

Appreciation is expressed to Mrs. Jessamine Fields, Public Health Nurse, Talladega County Health Department, for her efforts in obtaining the statistical data used.

This discussion of the Sylacauga, Alabama, plan for delivery of indigent maternity cases is presented to show how physicians, hospital administrators and county public health personnel have cooperated to help reduce maternal mortality in one locality. It is felt that the success of the plan may encourage physicians caring for indigent patients over the state to try to work out a similar plan in their own areas.

Perhaps it should be stated first that there are two factors which make such a plan feasible. First, the doctor-population ratio for Alabama is gradually improving. There are more doctors per unit of population than ever before. Second, in the past several years there has been a decided increase in the number of acceptable hospital beds in Alabama. Based on the national standard of 4½ needed hospital beds per 1,000 population, the percentage of all available hospital beds in Alabama in 1956 was 64.24. In 1950, the percentage was only 54.16. A large number of these additional beds have been built in small towns and have met Hill-Burton requirements. In other words, there are, in most areas, enough doctors and hospital beds to make such a plan workable. Insufficient professional personnel and insufficient hospital beds have heretofore been reasons for lack of hospitalization for the parturient patient.

Several years ago, Dr. W. C. Friday and Dr. Max E. Vaughn, the physicians attending the Talladega County Prenatal Clinic in Sylacauga, became convinced of the merit of hospitalization for indigent maternity cases. The obvious advantages of hospitalization for delivery are that (1) a physician is in charge of delivery instead of a midwife, (2) obstetrical emergencies can be efficiently managed, (3) compatible blood is available for emergency blood transfusions, and (4) neonatal care of the infant is in the hands of professional nursing personnel. In those areas of the country having the lowest maternal mortality rates, 99 per cent of the patients are hospital delivered, and all are delivered by physicians. The physicians acting as clinicians for the clinic at Sylacauga knew that hemorrhage was one of the major causes of maternal mortality in Alabama. They learned that hemorrhages of a serious nature during pregnancy occur during labor or within the first few hours of the postpartum period in a high percentage of cases. This type of hemorrhage accounted for a large proportion of the maternal deaths in the

state. Blood replacement by transfusion would probably have been beneficial in preventing some of these deaths. Transfusions could have lowered the mortality in puerperal sepsis, cesarean section, and especially in cases of rupture of the uterus preceding and during operation, as well as in cases of acute blood loss from other causes. Actually, hemorrhage is felt to be a factor, directly or indirectly, in at least 65 per cent of maternal deaths.

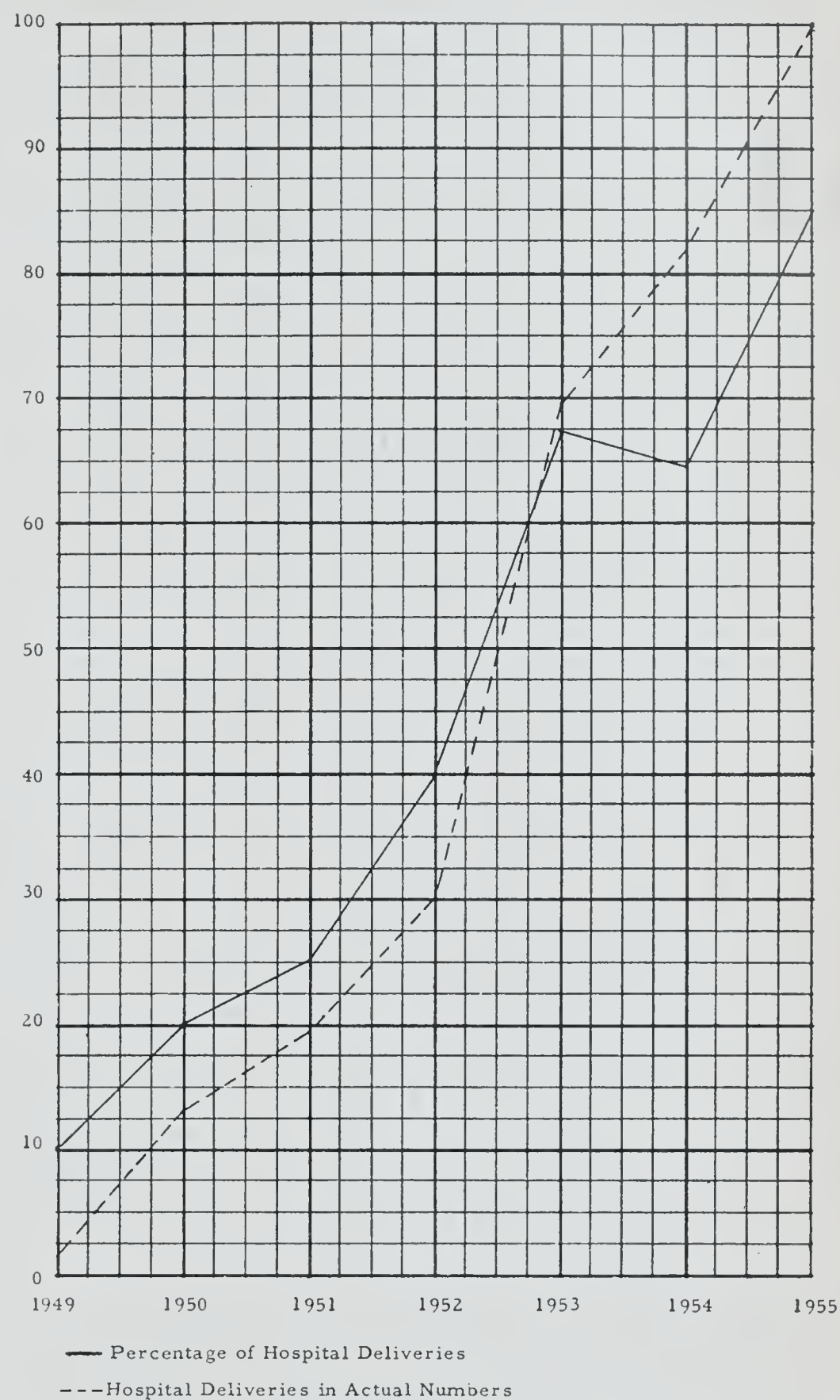
Acute blood loss cannot be effectively combated in the home. In home deliveries, complicated situations can assume hazardous proportions in a short period of time. The accoucheur attending a patient in the home is helpless in the face of sudden acute excessive hemorrhage. Such emergencies can be handled effectively only in a hospital where compatible blood is available in adequate quantity.

Although the clinicians were convinced that hospital care is very desirable, they also realized that the economic factor in hospitalization was a huge problem. Even if patients were convinced that hospital delivery would be to their advantage, the cost of such hospitalization was beyond the reach of many. These clinicians believed, however, that many patients classified as medically indigent could, in fact, make some payment. With the cooperation of hospital administrators and physicians who would deliver these patients, a plan was developed to make hospital delivery available to clinic patients at a fee that would not involve a financial hardship. For a nominal sum, patients are offered hospitalization for 24 hours for their delivery and the services of the obstetrician of their choice. The 24-hour period was decided upon because of the established fact that a large percentage of both maternal and neonatal mortalities occur during labor and during the first 24 hours thereafter. Mothers and babies thus receive hospital care during the period which is most critical for both. (A small group of patients, about ten per cent, delivered under this plan require hospitalization for longer than 24 hours due to complications of delivery and travel difficulties.)

Fees are collected by county health department personnel during clinic visits. Payment is thus spread over the prenatal period. These small payments at intervals can be made by many for whom lump sum payments are out of the question. The arrangement actually amounts to a low-cost prepayment plan for hospital delivery service.

At the time the plan was inaugurated it was feared that the patients might not accept hospitalization because of custom—they had previously been delivered by local midwives—and superstition. However, these fears proved groundless as Chart II indicates. During 1947 there were but

CHART II
HOSPITAL DELIVERIES OF MATERNITY CLINIC PATIENTS
AT SYLACAUGA, ALABAMA



19 clinic patients delivered in hospitals. This number increased to 100 in 1955. During the period from 1949-1955 the percentage of hospital deliveries increased from 10 to 85 for all clinic patients. The clinic patients obviously prefer a package-type hospital delivery service. The benefits they derive from hospital delivery under the care of a physician have been proved to them.

Results of the plan have been most gratifying. The maternal mortality in this group of patients was zero. The incidence of stillbirth deliveries occurring in hospitals as compared with stillbirth delivery incidence in the home is noteworthy. There were 9 stillbirth deliveries in the hospital delivery group of 315 patients, a percentage of approximately 3. There were 13 stillbirths in the home delivery group of 270, a percentage of still-

birth deliveries of approximately 5. In other words, there were about 1½ times more stillborn infants delivered in the home than were delivered in the hospital.

These figures are impressive, but more impressive is the statistical study of the neonatal deaths occurring in the two groups. There were 8 neonatal deaths occurring in the home delivery group of patients as compared to none in the hospital delivery group. These figures are felt to be statistically significant. The plan has been in effect in Talladega County for about four years. The desirable features of the plan are summarized as follows: (1) The indigent prenatal patient is given the advantage of hospital delivery so that incidental hemorrhage or complications can be treated effectively. (2) The attending physician is available and prepared to handle and direct the treatment for any emergency that may arise. (3)

The plan has limited the activities and number of midwives practicing medicine. (4) The plan has improved the doctor-patient relationship. (5) The plan has encouraged indigent patients to accept some responsibility for medical care. (6) Considerable help is given hospitals in increasing hospital-day revenues. Upon examining the census of hospitals in rural counties of the state, it has been found that an increase in census would be welcomed by hospital administrators. (7) It is desirable from an educational standpoint in helping the patient understand the services available in her own county hospital. It will also help to eliminate the fears and superstitions of certain illiterates regarding hospitals. (8) The American plan for medical practice includes medical care for all. Failure to provide adequate medical care furnishes ammunition to those groups which favor socialized medicine.

SPECIAL ARTICLE

INFLUENZA

LEROY E. BURNEY, M. D.

Surgeon General

U. S. Public Health Service

Washington, D. C.

During recent weeks the eyes of the medical profession have been on the influenza epidemic which swept through the Far East. Thus far only sporadic outbreaks have occurred in the United States, affecting several thousand people. Experts in the field say there is little question that we will have an epidemic in this country sometime during the fall and winter months.

Since 1948 the Influenza Study Program sponsored by the World Health Organization has maintained a system of reporting specific diagnoses of influenza in the United States, Canada, South America and Europe.

The current epidemic was first reported in Hong Kong and Singapore in late April 1957. Epidemics followed rapidly in Taiwan, the Philippines, the Malay States, Japan, India and other areas. Virus sent to this country for antigenic analyses were found to be type A, but antigenically different from any previously known A strains in the hemoagglutination inhibition test. Animal antisera prepared against type A strains did not inhibit or neutralize the new variant and no protective antibody could be demonstrated in sera from human beings repeatedly vaccinated with previously prevalent type A virus.

Information to date suggests that little protection against the new virus is gained by previous vaccination with existing influenza vaccine.

Beginning June 2 a series of influenza outbreaks were reported among ships which had been berthed in Narragansett Bay, Newport, R. I. Spread of the epidemic was erratic. Subsequent infections have been reported in San Diego, Monterey, Davis and San Francisco, Calif.; Cleveland, Ohio; Lexington, Ky.; Valley Forge, Pa.; Salt Lake City, and Grinnell, Iowa.

CLINICAL AND PUBLIC HEALTH ASPECTS

The experience in Asia and in the United States provides no basis for predicting an increase in severity of infection in the coming fall and winter or during the next year or two. The present concern arises largely from the possibility that a more virulent variety of the Asian type may emerge. The severity of the 1918 epidemic is believed to have been due to some mutation which exposed the population to a virus or viruses radically different antigenically from those strains to which they had been previously exposed.

Influenza is usually characterized by abrupt onset, prostration, fever up to 104, headache, myalgia, cough and sore throat. X-ray examinations of the chest usually show no abnormal findings. Leukopenia is common in uncomplicated cases. The febrile period usually lasts 3 to 5 days, following which the patient may complain of extreme weakness for several more days.

In laboratory diagnosis of individual cases, the

virus may be isolated from secretions of the nose and throat early in the course of the illness. The procedure consists of inoculating chicken eggs which have been incubated for about ten days, and recovering the virus in the fluids of the embryonic sac.

Paired specimens of blood, one taken in the acute phase and the other 10 days to two weeks later, may be used for serologic tests. A four-fold or greater rise in antibody titer is regarded as an indication of influenza infection. Since neither of these laboratory procedures can be completed while the patient is still acutely ill, they are of little value to the physician in prescribing treatment. Such tests are necessary, however, to confirm the presence or absence of influenza in a community.

IMMUNOLOGIC ASPECTS

Studies in the military reveal that a properly conditioned vaccine is 70 per cent effective under epidemic conditions and that reactions to the vaccine are quite rare. Individuals known to be sensitive to egg are not given the vaccine since virus is grown in embryonated eggs.

The manufacturers of vaccines are able to produce a satisfactory monovalent vaccine (containing the Asian strain) in sufficient quantity for civilian use this winter. They are currently working on a large-scale production basis.

PRESENT CONSIDERATIONS

Isolation of causative virus has been made prior to the appearance of influenza in the United States; thus for the first time in history we are in the fortunate position of being ahead of an impending epidemic of influenza. It seems probable that influenza will continue to spread for the remainder of the summer months but will not be highly epidemic in this country until fall or winter when outbreaks may be anticipated. While the disease will probably be mild there is always the outside possibility of a repeat of the 1918 epidemic. There is a further possibility that the virulence of the infection as reflected in case-mortality rates will increase. Even though these are still only possibilities, any preparations which need to be done to meet these eventualities must be accomplished now. After a pandemic starts it will be too late.

At the invitation of the WHO, a plan for investigation of influenza outbreaks in foreign countries has been developed by the influenza commission of the Armed Forces Epidemiological Board. Teams making the studies will be particularly interested in determining (a) the properties of the virus, (b) complete clinical descriptions, (c) whether a bacterial component is associated with the illness, and (d) epidemiologic aspects.

The American Medical Association has already announced a program designed to offset the severe strain placed on medical personnel when so many people suddenly become ill.

Finally, in recent years the nature of influenza in this country has not warranted the use of influenza vaccine except on a group basis to minimize absenteeism or in so-called priority groups. However, the present influenza epidemic, with its rapidity of spread and high attack rate, is sufficiently unusual to press for immunization against the new strain of influenza virus. As a properly constituted vaccine is the only preventive for this disease, the Public Health Service, with the Association of State and Territorial Health Officers and the American Medical Association, plans to promote the use of the vaccine as soon as it becomes available. To accomplish this we plan to embark upon an educational and promotional campaign to encourage all persons who want it to seek influenza vaccine on a voluntary basis. Any such campaign must be conducted in an orderly fashion to avoid confusion and hysteria in the public and will call for the combined efforts of all of us.

SUMMARY

1. Influenza has been known for centuries under a variety of names but, except for the pandemic of 1918, the illness was regarded lightly.
2. For the past twenty-five years it has been possible to incriminate certain strains of Type A virus and Type B virus as causative agents of cyclic outbreaks of influenza.
3. The current epidemic in the Far East and sporadic outbreaks in the United States and elsewhere are caused by a new strain of Type A virus popularly known as the Far East strain.
4. There is a distinct probability that the current influenza epidemic will increase and develop into pandemic proportions by late fall or winter. Also there lurks the possibility of an increase in virulence of the infection as reflected in case-mortality rates.
5. A properly constituted vaccine containing the new strain of Type A virus represents the only preventive tool at our command.
6. Influenza vaccines have been proven effective and safe in controlled studies conducted by the military.
7. The Public Health Service, in cooperation with the State and Territorial Health Officers and the American Medical Association, will stimulate and promote a nationwide voluntary program of vaccination against the prevalent strain of influenza.



PRINCIPLES OF MEDICAL ETHICS
OF THE
AMERICAN MEDICAL ASSOCIATION
(As amended and adopted June 1957)

Preamble—These principles are intended to aid physicians individually and collectively in maintaining a high level of ethical conduct. They are not laws but standards by which a physician may determine the propriety of his conduct in his relationship with patients, with colleagues, with members of allied professions, and with the public.

Section 1.—The principal objective of the medical profession is to render service to humanity with full respect for the dignity of man. Physicians should merit the confidence of patients entrusted to their care, rendering to each a full measure of service and devotion.

Section 2.—Physicians should strive continually to improve medical knowledge and skill, and should make available to their patients and colleagues the benefits of their professional attainments.

Section 3.—A physician should practice a method of healing founded on a scientific basis; and he should not voluntarily associate professionally with anyone who violates this principle.

Section 4.—The medical profession should safeguard the public and itself against physicians deficient in moral character or professional competence. Physicians should observe all laws, uphold the dignity and honor of the profession and accept its self-imposed disciplines. They should expose, without hesitation, illegal or unethical conduct of fellow members of the profession.

Section 5.—A physician may choose whom he will serve. In an emergency, however, he should render service to the best of his ability. Having undertaken the care of a patient, he may not neglect him; and unless he has been discharged he may discontinue his services only after giving adequate notice. He should not solicit patients.

Section 6.—A physician should not dispose of his services under terms or conditions which tend to interfere with or impair the free and complete exercise of his medical judgment and skill or

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tend to cause a deterioration of the quality of medical care.

Section 7.—In the practice of medicine a physician should limit the source of his professional income to medical services actually rendered by him, or under his supervision, to his patients. His fee should be commensurate with the services rendered and the patient's ability to pay. He should neither pay nor receive a commission for referral of patients. Drugs, remedies or appliances may be dispensed or supplied by the physician provided it is in the best interest of the patient.

Section 8.—A physician should seek consultation upon request; in doubtful or difficult cases, or whenever it appears that the quality of medical service may be enhanced thereby.

Section 9.—A physician may not reveal the confidences entrusted to him in the course of medical attendance, or the deficiencies he may observe in the character of patients, unless he is required to do so by law or unless it becomes necessary in order to protect the welfare of the individual or of the community.

Section 10.—The honored ideals of the medical profession imply that the responsibilities of the physician extend not only to the individual, but also to society where these responsibilities deserve his interest and participation in activities which have the purpose of improving both the health and well-being of the individual and the community.

INFLUENZA

From the Council on Public Health, American College of Chest Physicians

Influenza epidemics in the Orient, which have been reported in the press during the past few weeks, are being watched with concern by public health authorities in the United States and in other parts of the world. The first outbreak reported was in Hong Kong, and it was followed by others in Singapore, Formosa, the Philippine Islands, and other countries in the Far East, as well as in American military personnel stationed there and on ships returning to the United States.

The illness reported has, in most cases, been mild, characterized by fever, malaise, headache,

mild respiratory symptoms, and a dry cough. Usual duration has been 2 or 3 days, few complications have been reported, and case fatality has been low. Attack rates, however, have been high—in some areas, as high as 50 per cent of certain population groups have been affected.

Isolates from these epidemics have been examined at the Walter Reed Army Institute of Medical Research, the Public Health Service Communicable Disease Center Virus Laboratory at Montgomery, Alabama, and at other laboratories in the United States. Virus strains were found to be similar to each other but quite different from prototypes isolated from outbreaks in the past. Complement fixation tests demonstrated that the strains were type A influenza virus, but antibody in human and animal antisera prepared against other type A strains did not inhibit hemagglutination by the new variants. No antibody has been demonstrated in sera from people residing in the United States. These strains represent a new set of antigenic variants which could circulate readily throughout the world. On the basis of these findings, the World Health Organization has alerted all influenza centers, and new strains have been distributed for further intensive studies.

Experience in the Far East indicates that influenza vaccines in current use do not protect against the new strain. Prototype virus has been submitted to several United States biologics companies, and they are preparing to manufacture vaccine which will probably be available in the fall.

In view of the extent and rapidity of travel between the United States and the Far East, this newly recognized strain of influenza will probably be introduced into this country. Our history of influenza, however, is such that outbreaks of any proportion are unlikely to occur during the summer months. There may be scattered groups of cases, traceable to individuals recently returned from the Far East.

The Public Health Service has taken steps to study and to help control any local outbreak that may occur. Health departments of all the states have already been informed about the situation. The Division of Biologics Standards of the National Institutes of Health is working with the pharmaceutical industry in expediting the production of vaccine. The Virus and Rickettsia Section of the Communicable Disease Center Laboratory (which is the WHO Influenza Center for the Americas) is preparing diagnostic reagents for the recently isolated strains and distributing them to regional and collaborating laboratories throughout the country and the Western Hemisphere. Studies are being carried on at this laboratory of all recently isolated strains of influenza obtained through the WHO. The National Office of Vital

Statistics is keeping public health authorities informed about developments. The Division of Foreign Quarantine is informing persons arriving from affected areas that should they become ill they should see their physicians without delay. The Epidemic Intelligence Service of the Communicable Disease Center, with officers assigned throughout the country, is ready to assist state and local health departments in the investigation of any occurrence of influenza.

The key to the situation, of course, is in the hands of the practicing physician. His alertness to any cases of influenza-type illness among his patients—or of this kind of illness in persons recently returned from the Far East, or their families or associates—will provide the information needed to deal with the problem before it becomes widespread. It is urgent that such information be given promptly to local health authorities, to protect the community and the country from the possibility of a full-scale epidemic.

Because of their special competence in respiratory disease, Fellows of the American College of Chest Physicians have a definite role to play in the surveillance and control of influenza. They will undoubtedly consider a diagnosis of influenza in any patient with symptoms of upper respiratory disease. The definitive diagnosis can be made only through virus isolations in the acute phase or by comparative titers of serum from the patient when he is acutely ill and when he is convalescent. Virus isolations require nose and throat washings obtained preferably during the first 3 days of illness and while the patient is still febrile, although virus may be recovered as long as 7 days after onset. The patient should gargle 3 times using about 15 ml. of diluent (broth, skimmed milk or distilled water) and returning the washing each time to the paper cup. Some infective material may be brought from the trachea into the pharynx if the patient will cough. The washings should be transferred to a closed tube for transportation to the laboratory and tested as soon as possible. If a delay of more than a few hours is necessary, the fluid should be kept chilled at refrigerator temperatures. When longer periods of storage are unavoidable, the washing should be frozen and stored, preferably near -70 degrees C. Serum samples should also be taken, one during the time of illness and a second 2 to 4 weeks later.

Not all laboratories are prepared to do virus isolation and serology for influenza. State health departments, however, can either do these procedures or refer the specimens to influenza reference laboratories such as the one at the Public Health Service Communicable Disease Center Virus and Rickettsia Laboratory, Montgomery, Alabama.

Although individual cases of influenza are not

required to be reported by a physician, in order that the first signs of an outbreak can be detected, physicians should call health officers about suspected and proven cases of influenza occurring this summer and fall.

Fellows of the College can also be especially effective in this situation by calling it to the attention of other physicians in their community, advising on diagnosis and treatment, and stressing the importance of recognizing and treating complications.

In countries not as yet affected by the current influenza epidemic, Fellows of the College should be on the alert for symptoms of the disease and take measures to detect the disease and prevent its spread.

DEATHS FROM HEART DISORDERS

More Americans than ever before are now living long enough to die from heart disease.

This point is made in a statistical report on heart disease published by Health Information Foundation in its monthly bulletin, *Progress in Health Services*.

Disorders of the heart, blood vessels and related organs, the Foundation pointed out, caused over 850,000 deaths last year—more than half the total number of deaths in this country. In 1925 these diseases caused only about one-third of all deaths, and in 1900, only one-fifth.

In a sense, said Foundation President George Bugbee, the increasing prominence of heart disorders "is a reflection of medical progress. With many once-feared infectious diseases now under control, more Americans are living to an age where they are more likely to become subject to heart disease and other degenerative disorders."

An estimated five million Americans have heart disease, and another five million suffer from related disorders such as high blood pressure, hardening of the arteries, cerebral hemorrhage, rheumatic fever and chronic nephritis.

"Substantial progress," the Foundation said, "has been made against premature death from many forms of heart disease, notably conditions of infectious origin—rheumatic and syphilitic heart disease, subacute bacterial endocarditis, etc. Surgery, drugs and special diets have been effective in certain cases of hypertension. But coronary heart disease remains a major unsolved problem."

Deaths from heart disease alone have increased 60 per cent since 1900 and now account for 360 fatalities per 100,000 population, or nearly two-fifths of all deaths. More than ever, heart disease has become an affliction of old age, the Foundation said. About 70 per cent of all deaths from

this cause occur after the age of 65.

Although disability from heart disease is apparently more prevalent among women, it causes more deaths among men. In fact, 75 per cent more men than women died from heart disease in 1955, as opposed to 15 per cent more in 1900. The disparity is highest between the ages of 35 and 49.

One frequently-stated explanation for this puzzling trend, HIF reported, is that "men are thought to be particularly subject and perhaps particularly vulnerable to strains and pressures of modern life, factors presumed to be important in causing the disease."

Commenting on current efforts to discover a preventive or cure for heart disease, Mr. Bugbee stated: "Coronary heart disease apparently flourishes where living conditions are highest, diets richest and psychological pressures heaviest—in other words, in the type of environment that seems to typify modern America. . . .

"The complexity of heart disease, the many disorders to which it is related, the long-term investigations needed before it can be better understood—all show that the road ahead may be a long one. . . . The public should realize that even more funds are needed for added research in this field."

The public has another role as well, he added. The American Heart Association, he said, advises that "some forms of heart disease can be prevented and a few can be cured. Almost all cases can be helped by proper treatment, especially if started at an early stage."

Mr. Bugbee concluded: "Thus, while the public support of group activities for research and for better medical and hospital care is vital, each person has an individual responsibility to use present medical knowledge in his own behalf—not only when illness strikes, but in time of apparent good health as well."

DR. FROMMEYER NAMED PROFESSOR AND CHAIRMAN OF THE DEPARTMENT OF MEDICINE, MEDICAL COLLEGE OF ALABAMA

Dr. Walter B. Frommeyer, Jr., Associate Dean of the Medical College of Alabama, has been appointed Professor and Chairman of the important Department of Medicine, effective September 1, 1957.

Dean Robert C. Berson, University Vice President for Health Affairs, said Dr. Frommeyer will succeed Dr. Tinsley R. Harrison who will continue as a Professor in the Department of Medicine.

No immediate successor to the position of Associate Dean was announced. Dr. Ben Branscomb is Assistant Dean.

Dr. Berson said Dr. Harrison asked to be re-

lieved of the administrative duties as department head so he could devote more time to teaching, clinical research, and writing.

Dr. Harrison is editor of one of the two leading textbooks on internal medicine, a frequent contributor to medical literature, and a nationally-recognized authority on certain heart conditions.

Dr. Frommeyer is widely known for his work on blood diseases and is co-author of the chapter on bleeding in the 1954 edition of Dr. Harrison's textbook and has written many articles on various aspects of blood disorders.

Dr. Frommeyer became associate dean on July 1, 1954, after a year as chief of medicine at the Birmingham VA Hospital. For three years previously he was assistant professor of medicine at the Medical College and director of the blood bank and tumor clinic at University Hospital.

He received his medical degree from the University of Cincinnati Medical College, served with the U. S. Army Medical Corps in World War II, completed a two-year residency in internal medicine at Cincinnati General Hospital after the war, and was a research fellow at the Thorndike Memorial Laboratory of Harvard University Medical School for one year.

MEETING, ALABAMA SURGICAL SECTION INTERNATIONAL COLLEGE OF SURGEONS

The annual scientific meeting of the Alabama Surgical Section of the International College of Surgeons will be held on October 30 and 31st, 1957, in the Out-Patient Department Auditorium of the Medical Center in Birmingham, Alabama.

AMERICAN FRACTURE ASSOCIATION

The American Fracture Association will hold its 18th annual meeting at El Paso, Texas, Hotel Cortez, Monday, September 30th, Tuesday and Wednesday, October 1st and 2nd.

The meeting will be preceded and coordinated with the University of Texas Postgraduate School of Medicine, El Paso Division, which will meet Sunday, September 29th, at the El Paso County Medical Society (Turner) Home, 1301 Montana Street. The University of Texas program is approved Category I by the American Academy of General Practice. The American Fracture meeting is approved Category II by the American Academy of General Practice.

The program on Sunday, September 29th, at the El Paso County Medical Society (Turner) Home will be on orthopaedic surgery. The American Fracture Association meeting, scientific program, will be limited to fractures entirely.

Registration will begin Sunday for the American Fracture Association at Hotel Cortez.

There will be a reception and all of those who attend the postgraduate program and the Ameri-

can Fracture Association meeting are invited at the Hotel Cortez 6:30 to 7:30 P. M. on Sunday, September 29th.

The American Fracture Association meeting will start at 8 A. M. each day, Monday, Tuesday and Wednesday. On Monday there will be a registration hour from 8:00 to 9:00 A. M., then the scientific program will begin.

Flavonoids Are Valueless in Disease Treatment—As matters now stand, flavonoids are of "little or no value" in the treatment of disease and have no known nutritional uses, according to a report by two American Medical Association councils.

William N. Pearson, Ph.D., of the department of biochemistry of Vanderbilt University School of Medicine, Nashville, Tenn., wrote the report for the A. M. A. Councils on Foods and Nutrition and Drugs.

The report in the August 10 A. M. A. Journal was prompted by "the recent upsurge of interest" in the flavonoids, particularly in the treatment of numerous diseases including the common cold, Pearson said.

Flavonoids are carbon-hydrogen-oxygen compounds that are widely distributed in nature as pigments in flowers, fruits, tree barks and vegetables. Their most important commercial source is citrus rind.

Considerable interest in the possible nutritional significance of these compounds was aroused in the late 1930's by Dr. A. Szent-Gyorgyi and co-workers who isolated "citrin" from citrus fruit peels and reported it to be effective in strengthening capillary and blood vessel walls against breakage, Pearson said. Such breakage of capillary walls is supposed to occur in a number of diseases.

However, valid tests for measuring the effect of flavonoids on capillary walls have not been devised, Pearson said. An earlier belief that they were a type of vitamin has not been confirmed.

Reports on several small studies were enthusiastic about the flavonoids' influence on common respiratory infections, because of their supposed capacity to strengthen capillary walls, but larger studies did not confirm these findings, Pearson said.

"On the basis of the best evidence now at hand, it would appear that flavonoids have no significant effect . . . on the course of the common cold."

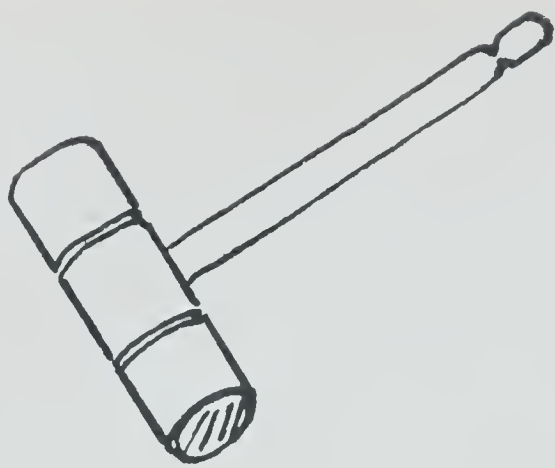
While they do appear to have some effect on capillary wall strength and do possess some mild blood-vessel-constricting effects, these properties are "rather weak when compared to those of other available agents," Pearson said.

Their effects on other diseases, including hypertension, diabetes, rheumatic fever, arthritis and various blood diseases, have been studied, but it is not possible to reach a valid conclusion as to their effectiveness because of the "general unreliability" of the testing procedures and the fact that periods of improvement occur spontaneously in these conditions.

In conclusion, Pearson said:

"The high hopes once held for the flavonoids . . . have not materialized. Instead, present knowledge indicates that, while they possess mild pharmacological properties under certain conditions, the flavonoids have no known nutritional functions. They cannot be regarded as essential nutrients. Those workers who claim therapeutic value for the flavonoids have not supported their claims with data obtained from well-controlled clinical studies.

"Until such studies are made, it must be concluded that the flavonoids are of little or no value in the treatment of disease."



President's Page

At the meeting of the M. A. S. A. in April of this year in Mobile an ordinance was adopted pertaining to committees of the Association. Under the new ordinance, nineteen standing committees were created to carry on the activities of the state Association.

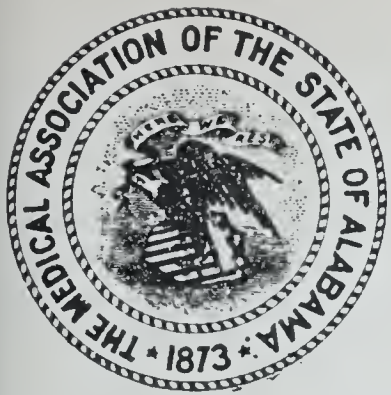
For administrative purposes, the work of the Association was divided into three bureaus. The chart of the chain of administrative responsibility and the place of each standing committee in relation to the Association was shown by diagram in the July *Journal*. This should streamline the workings of the Association to prevent overlapping of various committee activities. Since we have an executive secretary and the public relations department has been greatly expanded, the activities of the Association can be better coordinated and controlled by a fixed program of activity.

Continuing the plan and purpose of the Association as arranged in the plan of administrative responsibility, a meeting of the chairmen of the 19 committees was held in Montgomery, August 3 and 4. Prior to this, the committees were urged to have a meeting so that the chairman could represent the thinking of his committee when the group met in Montgomery. The attendance, the accomplishments, and the enthusiasm of the meeting were most gratifying. Twenty-two (22) out of 33 extended invitations accepted. I, personally, was rather overwhelmed by the amount of work accomplished in so many fields of interest in such a short period of time. In 33 years of membership in this Association I have never seen so much positive thinking done at one time. Now we have our objectives more clearly outlined, and our executive secretary will have the benefit of the thinking

of a large group of our Association in his activities during the year.

The results of this meeting will be published in the *Journal*, beginning in the Organization Section of this issue, so that all members can be alerted to the activities of the various committees and see how our new program of positive action is shaping up.

The above work and program are just a beginning. After having watched the problems of medicine multiply over the last 30 years at both the state and national level, it seems appropriate that other objectives must be considered. If our profession is ever to be rendered impotent, it probably will be due to lack of strength within our organization. We see industry, labor and organized government setting up programs with the aims of hiring and controlling men of medicine, both at state and national levels. Are we selecting students with enough rugged individualism to remain loyal to the profession at all times? Should our objectives in teaching be more directly focused on building a strong national organization as well as a highly skilled physician? Cult organization is becoming more widespread each year. At what level should the thinking start as to the quality and objectives of medical education? If our state organization has the greatest responsibility in this problem, it would be wise for us to be more aggressive in our efforts.



ORGANIZATION SECTION

PROGRAM OF THE ASSOCIATION

The Association now has a well defined plan of action. Its aims have been crystallized into concrete goals, and the program for reaching these goals has been stated in definite terms.

When President John A. Martin called a meeting of officers and committee chairmen on August 3 and 4, twenty-two members answered the call. Committee chairmen who were not able to attend either requested committee members to represent them or submitted written reports for consideration.

Promptly at 4:00 P. M. on Saturday, Dr. Martin called the meeting to order and in a few concise statements reviewed the plans and aims of the work sessions. All participants had received full instructions by letter prior to the meeting date. The group then broke into three bureaus.

Background information on the purpose of the meeting and its general plan were printed in this section of the August issue of the *Journal*. Herein begins the report of the program that grew out of the meeting.

BUREAU OF ADMINISTRATION

Dr. J. P. Collier, Advisory Committee member who guides and coordinates the work of the segments of this bureau, sat with Drs. Douglas L. Cannon, Editor of the *Journal*; J. O. Morgan, Chairman, Committee on Insurance; H. G. Hodo, Jr., Chairman, Committee on A. M. E. F.; Hugh Gray, Chairman, Committee on Finance; Robert Mason, Committee on Blue Cross-Blue Shield; and E. M. Moore, Chairman, Committee on A. M. A. Program Evaluation. Reports were read and discussed at length. There was no necessity for prodding members into participation. The work of the component parts of the bureau is interrelated, and contributions to the analysis and planning came from every member seated around the table.

The results of the work session were presented to the assembled group by Dr. Collier on Sunday morning. Following is his report, together with supplemental suggestions and recommendations which were made in the Sunday assembly.

Journal

The *Journal* is now paying its way with advertising which is handled through the State Medical Journal Advertising Bureau, Inc., a non-profit corporation.

Dr. Cannon, Editor, reported that scientific articles are needed for publication in the *Journal*; that it is a continuing struggle to accumulate sufficient good material to maintain the standard that has been held by the *Journal* thus far and still print the number of pages that must appear in order to warrant continued advertising by ethical organizations. Alabama doctors were urged to make the effort to contribute scientific articles for publication.

Rolls of Association

The rolls of the Association change daily and are kept current in the state office. When the 1957 roster was printed, July 31, 1957, membership totaled 2001. Dr. Collier pointed out that this does not show a decrease in membership and that only a few physicians in the state declined to pay the increased dues and were dropped for that reason.

Annual and Special Sessions

The mechanism for handling special sessions is set up. Contemplated changes in the mechanics of the annual session will be perfected before the April 1958 meeting.

Medicare

The Medicare program is set up and a contract has been signed. A committee from the Board of Censors, headed by Dr. Robert Parker, is functioning on an active basis, reviewing and ruling on special cases. No further work is required on the overall program until it is time to review it for the purpose of renewing or negotiating a contract at the expiration of the present one. At that time the newly formed Committee on A. M. A. Program Evaluation will be called upon to assist.

Intra-Professional Relations

The work in this field is being handled by the state office which assists specialty and other groups upon request.

Committee on Constitution and By-Laws—Dr. W. R. Carter, Chairman.

Revisions to the Constitution and By-Laws have been proposed and will be acted upon at the next annual session of the Association. Dr. Collier urged members to study the revisions which are included in the Transactions issue of the *Journal* (June 1957), in order that they may know before the revisions are acted upon in April 1958 what effect they will have upon the organization.

Committee on Insurance—Dr. J. O. Morgan, Chairman.

Report of the Chairman: "To the present time practically all of the activities of this committee have been concerned with putting into effect group plans of health and accident and also professional liability insurance for members of this Association. These plans were approved by the Association in April 1956. The members had the opportunity of availing themselves of this insurance soon after that meeting. These plans are being administered by the Liberty Mutual Insurance Company. More than 600 doctors are carrying the health and accident insurance and more than 500 the professional liability.

"At the time the insurance plans were approved, the Association also sanctioned the formation of county medical society insurance committees. The county societies were slow in providing these committees; but now, as a result of the efforts of the state Association's Committee on Insurance and those of Mr. Dozier, about three-fourths of the county societies have these committees.

"The committee is working closely with the Insurance Company in an effort to make the plans work smoothly."

In reply to questions which were asked during the work session and in the Sunday assembly, Dr. Collier made the following statements:

No claim under the professional liability insurance coverage is settled without the individual involved agreeing to the settlement.

The county committees should pass on each applicant for insurance.

County committees were set up primarily to secure group insurance, but they also will help individuals who have insurance with outside agencies. Dr. H. E. Simon stated that it should be made very clear that the services of the committees are for all members.

Dr. Simon also called attention to the fantastic claims that are being made by private insurance companies and asked if the committee or the Association was concerned with activities of outside companies. Dr. Morgan stated that the Committee on Insurance had not concerned itself with such activities in the past but that it would do so if the Association desired it. Dr. Collier mentioned recent activity in the State Legislature along this line.

Dr. Hughes Kennedy made a comparison between the health and accident plan of the Association and one written by an outside company, which is tax deductible. He suggested that the wording of the Association contract might be changed so that it would be deductible for tax purposes.

Committee on Medical Education and Hospitals—Dr. W. B. Frommeyer, Jr., Chairman.

Report of the Chairman: "Proposed program—1. Establishment, in cooperation with the Medical College of Alabama, of an elective curricular course in: a) Medical Ethics, b) Organized Medicine, c) Hospital Practice, and d) Office Practice.

"2. Study of ways and means of developing house staff interest in non-University approved hospitals.

"3. Consideration, in a broad sense, of the length of medical education.

"4. Consideration and development of ways and means of stimulating interest in medicine in the college and high school student.

"5. Development of postgraduate education in conjunction with the Committee on Postgraduate Education."

Dr. Cannon recommended that the elective courses described in "1" above be made mandatory. The group concurred in the recommendation.

Committee on A. M. E. F.—Dr. H. G. Hodo, Jr., Chairman.

Report of the Chairman: "Proposed program—1. Letter to the president of each county medical society with copy sent to the secretary, urging an active county committee to stimulate contributions to A. M. E. F.; in the same letter suggesting contributions from the county society itself; this letter to be sent out about September 15, 1957.

"2. Letter to each doctor in the Medical Association of the State of Alabama asking for contributions; this letter to be sent out about October 1, 1957.

"3. Reminder in November or December issue in P. R. Notes—along with a return envelope for donations."

Dr. Collier pointed out that contributions to A. M. E. F. could be designated by the contributing member for use at the school of his choice.

Committee on Finance—Dr. Hugh Gray, Chairman.

It was reported that this committee has just been activated and has not held a meeting.

It is understood that the committee was created to advise with the executive secretary about all financial matters of the Association.

It will be the intent of the committee to work closely with the executive secretary and advise him in any way that it can be of help.

Dr. Collier called attention to the effort that is being made to reimburse officers and committee members for actual expenses incurred in attending meetings.

Committee on Blue Cross-Blue Shield—represented by Dr. Robert H. Mason.

Dr. Mason's report: "During the past year, July

1956-July 1957, several outside events have transpired which directly affect the program of Blue Cross-Blue Shield of Alabama. First of these has been the Medicare program. As you know, Blue Cross is the agent for the Defense Department for the hospital portion only. In respect to the medical-surgical portion, this is handled by a private insurance company. After the state Association rescinded its action to act as the agent for the program, the executive committee of Blue Cross-Blue Shield of Alabama decided to do nothing (unless requested by the Medical Association) toward being appointed agent for the medical-surgical portion.

"A second event has been the increased demand, both from the medical profession and from the public at large, for better and broader medical and surgical coverage under Blue Shield. In part to meet this demand, a three (3) day workshop involving the entire executive committee was held in Birmingham May 27, 28 and 29 of this year. A much higher priced policy is now being prepared which will be comparable to the Pennsylvania B Surgical Schedule. This would involve very cautious underwriting and details of this policy are not yet completed.

"The third event has been a demand for increased payments to member hospitals. This is necessitating a new audit to determine a new true cost formula, with correction for losses the hospitals may now be taking.

"It is hoped that within the next sixty (60) days a better Blue Shield medical-surgical plan will be available and any losses which member hospitals are now taking under existing policies will be rectified. One must remember that any change must be governed by sound underwriting principles and carefully gone over by an actuary. Also, existing policies can not be changed very rapidly, so it would be some time before large numbers of policy holders would have available expanded Blue Shield benefits.

"The last item of interest has been increased contact between the executive committee members representing the Association and physicians throughout the state who have ideas for improving the benefits of the policy holders. This contact is encouraging and certainly should continue to increase."

Dr. J. P. Mudd stated an objection to tying the two programs together so that it is necessary to take Blue Shield in order to secure Blue Cross coverage. Dr. Collier briefly reviewed the origin and development of Blue Shield, pointing out that for the first several years it was carried financially by Blue Cross. No action was recommended.

Dr. Hughes Kennedy recommended that the Blue Cross policy should be written to spell out the difference between 3 days and 3 hospital days,

in an effort to minimize misunderstanding.

In reply to questions from the Sunday assembly, Dr. Collier stated that the Blue Cross-Blue Shield executive committee is made up of 6 M. A. S. A. representatives, 6 hospital administrators, and 6 business men elected by the Board of Trustees which is made up of one man from each of the approximately 108 hospitals in the state. The six physicians listed as committee members in the M. A. S. A. committee member list are the 6 representatives who sit as M. A. S. A. representatives on the Blue Cross-Blue Shield committee.

Committee on A. M. A. Program Evaluation—Dr. E. M. Moore, Chairman.

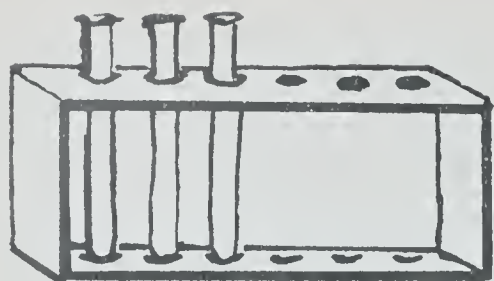
Report of the chairman: "This, as I understand, is a new committee under the Bureau of Administration. The exact field of this committee's activities seems very broad and somewhat indefinite. Our aim will be that of cooperation and any suggestions regarding its activities and procedures will be greatly appreciated.

"Apparently, this committee should endeavor to evaluate the various programs proposed by the A. M. A. and to suggest consideration of active participation by the State Medical Association, through the appropriate committee.

"My tentative plan would be: (1) to divide this five member committee into two groups; making each responsible for following the activities of half of the A. M. A. 43 councils and committees, (2) to obtain literature regarding its present programs in these various fields, (3) to set a date for a meeting of our committee for discussion and future planning on committee work."

The work of this newly activated committee was discussed at some length during the work session on Saturday. In his report to the Sunday assembly, Dr. Collier supplemented the chairman's report by stating that the program of the A. M. A. was so broad in scope that it was not possible for the state Association to set up a sufficient number of committees to handle all phases of the program that might be passed on to the state level. He used as an example, Medicare, which required emergency action to set up a committee to handle all preliminary details and actually implement the program. In the future, when a segment of the A. M. A. program is passed on to the state Association, it will be referred to the proper standing or special committee if it comes within the scope of one of those which has been established. If no such committee exists, then the A. M. A.-referred program will go to the newly created committee for study, evaluation and recommendation.

This is the program of one of the three bureaus of the Association. Reports on the other two bureaus will be made in succeeding issues of the *Journal*.



STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.

State Health Officer

UNDERSTANDING MEANS HELP FOR MENTALLY ILL

When things go wrong with the plumbing at your house, you may follow one or several courses of action. You yourself may first try to set things right, or another member of your family may try his hand at repairing certain damage. The problem may be only that of a clogged drain through which water will no longer pass. In the event your knowledge of repair of such equipment is limited, and you are thus prevented from returning the system to its proper functioning, you may next call in someone who has special skills to handle just such problems. That someone is a plumber who, by reason of special training or years of experience, can usually take care of the things that go wrong with plumbing systems.

Given a certain problem, then, action is usually set in motion to try to solve it. In the example of ill-functioning plumbing we have outlined, there was first an attempt to make use of the individual's own resources. But when these efforts failed, there was a referral to a specialist, a commonly indulged-in action in our time.

But the referral was specific: it necessitated a certain knowledge of, first, the nature of the problem and, next, the type of specialist available to cope with it. A lawyer, for example, would not be engaged to remedy a clogged drain, just as a plumber would not be employed to untangle a thorny legal problem. The reason, of course, is simple: most people have enough knowledge of the nature of these situations and of the fields of work involved to enable them to go at once to the specialist best qualified to do the job.

Such problems, and the actions to solve them, are more or less on an individual basis. They may, as in the case of the clogged drain, immediately affect only the people living in the brick house down the street, four or five people, let us say. But what about major problems, those affecting hundreds of thousands of people, even millions? How does a knowledge of the nature of the situation affect these?

Let's consider what is commonly called the nation's number one public health problem as an example. Mental illness is the problem, laying its

claim to top priority in public health because of the more than half a million people in mental hospitals in the United States. In addition to this large number, an extra 20 to 30 million Americans are estimated to be handicapped by less serious emotional illness.

All the patients in mental hospitals and many of the ones outside need special help. This help, when it is available, comes from all or some of the members of the mental health team and others. This "team" is composed of four recognized types of professional mental health workers. They are the psychiatrist, the clinical psychologist, the psychiatric nurse and the psychiatric social worker. These are the specialists, qualified by training and experience, who carry on the organized mental health programs in existence today.

Unfortunately, there is a shortage of these mental health specialists, even to take care of the persons who are already the victims of serious and minor maladjustments and emotional ills. However, even if there were enough individuals especially trained to do this work and to go around, the battle would not be won, so to speak. For beyond this special help, or rather preceding and following it, the mentally ill need assistance from other sources.

In this regard, the slogan for Mental Health Week in a recent year had special significance. That slogan or theme was "The Mentally Ill Need Your Help," and, by way of explanation, "He has turned his back on life—please don't turn your back on him." The "he" of this theme is, of course, the individual who is mentally ill. And the word "please" is directed at you.

This, then, is the challenge the problem of mental illness holds for the nation, for the community and for the individual. But to meet this challenge, a great deal more than lip service must be paid to the help the mentally ill need.

For even a great part of the aid, much less all the assistance, this group needs will not be forthcoming if the casual, lip service approach is taken. Rather, it will come with a greater, more universal understanding of what emotional illness is, what forms it may take, how it develops and what can be done about it.

The increased, more widespread understanding that is desirable does not mean that everyone could or would be members of the mental health team, or active in the actual treatment of mental

patients. What it does mean is that a healthier attitude toward emotional problems would develop, that a great many more individuals than at present would lend active support to organized mental health programs.

To say that a greater understanding is a necessity for those with emotional ills today is not to say that we have not made progress toward this goal. On the contrary, many older people no doubt could testify as to the great forward strides that have been made even during their lifetime. Many of them may well remember when a mentally ill victim was confined to a jail. Moreover, even if some of the older people do not have personal knowledge of the facts, many of them may know second-hand that some of their contemporaries were often bound in chains, poorly fed in ill-heat-ed quarters, because it was thought that they were insensitive to pain! And far from being the exception, this deplorable treatment of the mentally ill was more nearly the rule.

Fortunately, most people today would agree that the mentally ill deserve far better treatment. But not only do we agree that they deserve it: we see that they obtain it. However, aroused public opinion still has not reached the point where the treatment this sick group receives is more nearly the ideal. Do you remember one point we brought out earlier, that there is today a shortage of trained mental health workers? No one group of individuals is responsible for this shortage. Rather, if any blame must be placed, it must rest on the shoulders of the public as a whole. In short, the dearth of this type of worker can certainly be explained in part by the lack of aroused public opinion which, if present several years ago, say, would have done its work and demanded such workers. And the force of this opinion would have been such that many of these demands would already have been met, with this result: the shortage now would not be so great, at least.

All of which brings us once again face to face with the greater understanding that we need before we can expect greater help for the mentally ill. This greater understanding—how can it be brought about or achieved, or what beginnings can be made?

By way of answer, let us turn to the life and work of a mental health pioneer of the nineteenth century. A fragile woman and a New Englander, Dorothea Lynde Dix began in the 1840's a single-handed, almost worldwide fight to improve conditions at institutions for the mentally ill. In 1843, when she started, the United States had 13 such institutions; when she retired 40 years later, there were 123 mental hospitals. Moreover, many of them were built as a direct result of her work, and all of them came under the influence of her humane concept of mental illness.

How did Dorothea Dix get to be a mental health crusader? One biographer tells us that her driving force was compensatory in nature; and that she recognized it as such. As she grew up, matured, she was able to sublimate her own unhappy childhood and misfortune by working for those less fortunate than she.

A greater understanding of emotional illness, as well as emotional health, then, can perhaps best begin with the individual. Life as it is played out on the day-to-day stage prompts many questions, behaviorwise. Hardly a day passes but that the action of some individual or a group will not prompt the question "why."

The individual action questioned may well be your own. You, for example, after what you consider a bad day at the office, may be irritable and cross to your family and closest friends. All the while, you may recognize that you are not your usual self, so to speak. And you may even connect your behavior directly with events that did not go your way at the office. But even with this knowledge, you might not be able to keep your irritability in check.

What, you may ask, does such simple, perhaps fleeting irritability have to do with understanding mental illness? First of all, it has to do with understanding yourself, with recognizing that other people, as well, react emotionally to what they consider adverse situations. And most important, it has to do with understanding that serious emotional illnesses are indefinitely complex; however, simply stated, they are brought on by a multitude of emotional stresses, the same type of stress that, for you, caused a minor incident, a brief period of crossness.

Once we understand that other people are like ourselves basically in reacting to stresses, how can this new insight be put to work? First of all, it can help us—and others—to recognize emotional problems for what they are. They are real illnesses in the truest sense of the word; they are diseases just as pneumonia and polio are. And as such, they deserve and need competent medical treatment.

Do people generally agree and accept the fact that emotional problems are true illnesses? Many individuals do. But some undoubtedly do not, judging from attitudes expressed or implied in random comments. The experience of one family, as recounted in "The Mind—In Sickness and In Health," a publication of a leading life insurance company, shows a lack of understanding of emotional problems as illness. A daughter named Mary in this particular family became irritable. As the weeks passed into months, she was deeper in the dumps, so to speak. Then one day, she did not come to breakfast, as she usually did before going to work. Her mother went up to her room

and scolded her. Whereupon Mary began to cry, and complained of being sick. However, she complained of no particular pain.

Her mother returned to the breakfast table, and Mary was the principal topic of conversation. It was her sister's opinion that Mary was just spoiled, while her father seemed to think that the root of Mary's trouble was anemia! Then her grandmother stated that "Mary is just one in a million who can't take it. If you ask my advice, Mary needs a good talking to!" And later in the day, Mary's aunt called to suggest that getting away for a vacation might be the solution. However, as this story goes, Mary refused to consider Florida, and her problems remained unsolved. For not one member of the family had considered the possibility that Mary might be sick, emotionally sick, and that she needed expert medical help.

An increasing understanding of behavior, of emotional problems may help the individual in still another way. Some stresses growing out of unmet emotional needs may be anticipated, to some degree. And the individual may thus be prepared and ready to offer support to others as the occasion arises.

Of course, the actual treatment of mental illness is a job for the family doctor or one or all of the mental health team members, just as the lawyer is the one to handle a difficult legal matter. However, the understanding and emotional support that all of us can give, a sort of emotional immunization, have an importance all their own. For conceivably, when and if there is enough of this emotional immunization, there will be fewer problems for the specialist.

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director

SPECIMENS EXAMINED

May 1957

Examinations for diphtheria bacilli and Vincent's	85
Agglutination tests	742
Typhoid cultures (blood, feces and urine)	626
Brucella cultures	8
Examinations for malaria	57
Examinations for intestinal parasites	3,527
Darkfield examinations	4
Serologic tests for syphilis (blood and spinal fluid)	26,520
Examinations for gonococci	1,611
Examinations for tubercle bacilli	3,754
Examinations for Negri bodies (smears & animal inoculations)	256
Water examinations	1,979
Milk and dairy products examinations	5,461
Miscellaneous examinations	631
Total	45,261

BUREAU OF PREVENTABLE DISEASES

W. H. Y. SMITH, M. D., Director
CURRENT MORBIDITY STATISTICS
1957

	Apr.	May	E. E.* May
Typhoid and paratyphoid	0	3	4
Undulant fever	0	0	2
Meningitis	14	19	11
Scarlet fever	626	536	28
Whooping cough	49	23	162
Diphtheria	4	3	7
Tetanus	1	3	3
Tuberculosis	138	187	216
Tularemia	1	1	1
Amebic dysentery	6	1	1
Malaria	0	0	2
Influenza	1370	214	232
Smallpox	0	0	0
Measles	1929	1768	972
Poliomyelitis	3	2	7
Encephalitis	1	0	2
Chickenpox	260	103	239
Typhus fever	1	2	1
Mumps	218	118	270
Cancer	1036	824	423
Pellagra	0	0	0
Pneumonia	203	167	182
Syphilis	155	219	228
Chancroid	7	8	11
Gonorrhea	311	368	385
Rabies—Human cases	0	0	0
Positive animal heads	19	22	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

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BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATISTICS AND COMPARATIVE DATA, MARCH 1957

Live Births, Fetal Deaths, Infant Deaths, and Deaths by Cause	Number Registered During March 1957			Rates* (Annual Basis)		
	Total	White	Non-White	1957	1956	1955
Live births	6834	4265	2569	24.2	25.3	24.6
Deaths	2396	1456	940	8.5	8.1	7.9
Fetal deaths	156	68	88	22.3	21.6	19.2
Infant deaths—						
under one month	138	69	69	20.2	17.5	21.8
under one year	225	100	125	32.9	27.4	32.1
Causes of Death						
Tuberculosis, 001-019	26	13	13	9.2	10.8	9.4
Syphilis, 020, 029	3	1	2	1.1	1.4	1.5
Dysentery, 045-048					0.4	
Diphtheria, 055						0.4
Whooping cough, 056						0.4
Meningococcal infections, 057	3	2	1	1.1	0.7	1.1
Poliomyelitis, 080, 081					0.4	0.4
Measles, 085	4	2	2	1.4	0.7	
Malignant neoplasms, 140-205	278	212	66	98.7	90.1	87.6
Diabetes mellitus, 260	33	22	11	11.7	10.5	8.0
Pellagra, 281					0.4	0.4
Vascular lesions of central nervous system, 330-334	343	189	154	121.7	111.8	96.7
Rheumatic fever, 400-402	6	4	2	2.1	1.4	0.7
Diseases of the heart, 410-443	807	527	280	286.4	275.5	269.6
Hypertension with heart disease, 440-443	170	84	86	60.3	54.8	49.4
Diseases of the arteries, 450-456	55	35	20	19.5	16.6	12.4
Influenza, 480-483	14	7	7	5.0	3.2	7.6
Pneumonia, all forms, 490-493	84	35	49	29.8	37.5	21.8
Bronchitis, 500-502	4	3	1	1.4	0.7	1.1
Appendicitis, 550-553	4	2	2	1.4	1.1	1.1
Intestinal obstruction and hernia, 560-561, 570	10	4	6	3.5	4.0	3.6
Gastro-enteritis and colitis, under 2, 571.0; 764	12	5	7	4.3	1.8	2.5
Cirrhosis of liver, 581	18	13	5	6.4	4.0	5.1
Diseases of pregnancy and childbirth, 640-689	11		11	15.7	7.0	13.1
Congenital malformations, 750-759	31	20	11	4.5	2.7	3.8
Accidents, total, 800-962	177	115	62	62.8	55.9	60.3
Motor vehicle accidents, 810-835, 960	82	56	26	29.1	30.6	22.2
All other defined causes	371	206	165	131.7	143.5	147.5
Ill-defined and unknown causes, 780-793, 795	102	39	63	36.2	29.6	35.6

Rates: Birth and death—per 1,000 population; Infant deaths—per 1,000 live births; Fetal deaths—per 1,000 deliveries; Maternal deaths—per 10,000 deliveries; Deaths from specified causes—per 100,000 population.



BOOK REVIEWS

Battle for the Mind. By William Sargant. Cloth. Price, \$4.50. Pp. 263, with 24 illustrations. Doubleday and Company, Inc., Garden City, New York, 1957.

From the interminable catalogue of Man's protean complexity, one would be hard pressed to compile a list of human behaviour patterns more disparate and superficially unrelated than those which the author undertakes to treat in this interesting book. Religious conversion, brain washing, combat fatigue, dancing (ceremonial and bop), abreaction, snake handling, transference and counter-transference are but a few which Dr. Sargant attempts to draw together and explain on a unified scientific basis, in language simple enough to be understood by a moderately literate lay reader, in a volume as small as this one is. To those who would not unreasonably conclude that this is an impossible task undertaken by either charlatan, or an idiot, and, at best, is more properly in the purview of science fiction, may be offered the assurance that Dr. Sargant is an eminent English psychiatrist, of impeccable scientific integrity, and his formulations are based on some near-forgotten experimental work by the unforgettable Pavlov.

Starting from the premise that there are four basic constitutional types of temperament, in the Hippocratic tradition, each of which responds to stress, qualitatively and quantitatively in a fashion peculiar to it, though influenced by environmental conditioning, Dr. Sargant postulates a maximum stress tolerance, beyond which normal adaptation breaks down and behaviour patterns, atypical for the specific temperament and conditioning, appear. Should this "transmarginal" stress be sustained, a non-specific protective "brain inhibition" intervenes, during which the subject becomes suggestible, dependent, malleable and highly vulnerable to conditioning influences which can establish new patterns quite alien to the subject's prestress norm.

With this highly mechanistic concept of human automation as his thesis, Dr. Sargant turns to his task with dedicated enthusiasm. He sees in such group experiences as religious conversions at revival meetings, "brain washing" in prison camps, the intense emotional arousal beyond the stress tolerance of the convert, the development of "brain inhibition," and the susceptibility to new attitudes and values imposed by the evangelist, the politician and the jailer. Much the same mechanism applies to the individual experiences of abreaction and narcosynthesis in the treatment of combat fatigue and the "voluntary" confessions of guilt at such events as the Moscow Purge trials. The transference relationship in analysis, leucotomy and electroshock treatment are evaluated and interpreted in the light of this formula.

The lay reader will be happy with the simplicity of the thesis and with the wide and morbidly fascinating areas of its application. The professional reader may proceed through the book with hair bristled and hackles raised. Is this over-simplification or scientific naivete'? Of the 194 references in the bibliography, there are remarkably few involving controlled experimental work. No allusion is made to Selye's G. A. S. or to the work of Hoagland, Pincus, Hebb and others who have contrib-

uted so ably to the investigation of human stress, and especially since some of their findings could very well be integrated into the author's theory.

What makes this book more interesting, apart from the newsworthy timeliness of the topics it covers, is its reflection of that breed of psychiatrist who never abandoned medicine with its heavy reliance on physiology, neurology and biochemistry for the more intoxicating promise of metapsychology, with its roots in sociology and cultural anthropology. The reader should perhaps temper his critical evaluations of this book by recalling that many of the major advances in psychiatric treatment in the past quarter century have had their origin in Europe, where the basic medical sciences are still held in high esteem. If we are due for some reorientation, this book may indicate the direction.

Philip S. Bazar, M. D.

General Urology. By Donald R. Smith, M. D., Clinical Professor of Urology and Chairman of the Department of Urology, University of California School of Medicine, San Francisco. First edition. Paper. Lithographed. Price \$4.50. Pp. 328, with 318 illustrations. Los Altos, California: Lange Medical Publications, 1957.

This is a well prepared and profusely illustrated textbook of general urology. The subject matter is presented in outline form and the illustrations are large and clear-cut. Numerous roentgenograms are reproduced with excellent clarity and detail. There are very good chapters describing the urological diagnostic armamentarium and equally good chapters on office diagnosis and therapy. While this book is not intended as a reference text, it is nevertheless much more thorough than the usual guide to the subject. The type is easy to read and the book is well laid out; however, for a fairly large book, the paper binding is not very satisfactory. In summary, it is an excellent textbook of general urology for the student and general practitioner.

William C. Waller, M. D.

The Compleat Pediatrician. By W. C. Davison, M. D., Professor of Pediatrics, Duke University School of Medicine; and Jeana Davison Levinthal, M. D., Instructor in Pediatrics, University of Michigan School of Medicine. Seventh edition, completely rewritten. Fabricoid. Price, \$4.25. Pp. 257. Duke University Press, Durham, N. C., 1957.

This is an unusual book, compiling a world of factual knowledge in a small compact volume. It is not a book to be read from cover to cover at one or several sittings; rather it should be kept handy for ready reference by the general practitioner and pediatrician. As such, it is invaluable. This is not to say that certain sections (especially those dealing with growth, development and feeding) do not make interesting and very rewarding reading, full of practical suggestions and good common sense, and spliced occasionally with humor.

At first glance this text is confusing, but it is surprisingly easy to use once the author's unorthodox style of

numbering subjects rather than pages is understood, and his innumerable cross references provide the reader with a concise means of differential diagnosis in pediatric problems. Besides this, it is probably the best known source of eponyms, such as fifth disease, in the pediatric field.

In this new edition, Dr. Davison has included material showing advances in diagnosis and particularly in treatment with antibiotics and steroids. The only criticism that might be levelled at this text is that it can not be

overly-descriptive of signs and symptoms nor too specific in dosage and treatment and still remain compact. Also, in mentioning every accepted form of therapy in many conditions described, it requires discrimination on the part of the practitioner to select the best and most applicable manner of treatment of any particular case he may encounter. But used as intended, this book rates as excellent and any doctor who cares for children would do well to own a copy.

Thomas C. Nolan, M. D.

AMERICAN MEDICAL ASSOCIATION NEWS

TIPS FOR OVERCOMING INSOMNIA LISTED

Physical contact—even if it's only your own hand touching your leg—helps overcome sleeplessness by providing a feeling of security, according to an Indiana sleep researcher.

Donald A. Laird, Ph.D., Lebanon, Ind., an industrial psychologist, said sleeplessness is frequently caused by some type of anxiety that keeps the person so "vigilant" that he can't go to sleep.

Developing a feeling of security, even temporarily, helps overcome anxiety and vigilance, Laird said in the August Today's Health, the American Medical Association's popular health magazine.

He pointed out that security for sleep does not deal with robbers breaking in, the house burning down or finances. It is an emotional security that deals with the affections of others, and the feeling of being accepted by them. The seeds of emotional insecurity are frequently planted in childhood, he said. Between the ages of three and five, most children go through a period of stress.

They become confused, annoyed, and sometimes rebellious at the restrictions placed on them, and they develop various fears. These anxiety-arousing stresses—and being sent to bed too early—make this age a time when going to sleep is often a difficult problem. A pattern of poor sleep is sometimes started and may last for years.

It is seldom possible to get rid of serious anxieties without the aid of specialists, but some people find they can shelve their anxiety at bedtime by the distraction method. They count sheep, rhyme girls' names with names of cities, do mathematical problems, or read something completely unrelated to their work or anxiety-producing problems.

There is also an assurance from body contact which is attributed to racially old characteristics of the sensory nerves in the skin, Laird said. The contact seems to allay unexpressible anxieties. Children may go to sleep more easily if a parent lies down beside them or keeps a hand on them. The contact of a favorite doll or woolly animal may help.

A few people provide their own body contact, unconsciously, by keeping a hand on their leg, face, stomach, or "their bald spot during chilly nights."

In theory, a person should sleep better alone in bed and alone in the room, but many people find that sleeping alone is "as anxiety-arousing as solitary confinement." Then having animals in the room or leaving on a radio or dim light helps provide a feeling of security.

Going through the same bedtime routine every night is almost universal. Such rituals serve a useful purpose. They seem to ease anxieties, temporarily at least, and decrease the need for feeling vigilant by distracting thoughts from anxieties, Laird said.

EYE BLOOD CHANGES SERVE AS RESUSCITATION GUIDE

A once-infallible sign of death might now become a signal of a chance for life as well, a University of Michigan pathologist reported recently.

Dr. Jack Kevorkian, Pontiac, Mich., said in the August 10 Journal of the American Medical Association that certain changes in the eye—known to occur at death—can also indicate that it is not too late to restart a suddenly stopped heart.

In recent years, sudden cardiac arrest has been overcome by opening the chest and restoring the heartbeat by hand massage and electric shock. This has become an almost common occurrence, mostly during surgery.

But the physician must know whether he still has time for this operation before the brain is permanently damaged by lack of oxygen. Certain changes in the blood supply of the eye's retina can serve as an indicator Dr. Kevorkian said. These changes can easily be seen through the ophthalmoscope.

When the heart stops, the flow of blood in the retina's veins becomes segmented or interrupted, while the blood in the arteries disappears altogether. The segments of blood in the veins continue to move for several minutes after the heart is stopped.

If such segmentation is seen, it is a sign that the heart has stopped, and if the segments are still moving, it is a fairly good sign that resuscitation would probably be successful, Dr. Kevorkian said.

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THE PSYCHIATRIST, THE GENERAL PRACTITIONER AND THE COMMUNITY

KENNETH E. APPEL, M. D.
Professor of Psychiatry
Chairman of the Department
School of Medicine
University of Pennsylvania
Philadelphia, Pa.

Psychiatry is not just for the psychiatrist. It is for medicine and the community. Some think it has lessons for civilization.

There are over fifteen million hospital admissions a year. More than fifty million persons attend out-patient clinics annually. These figures say nothing about the office practice and home visits of between two and three hundred thousand physicians in our country.

Conservatively estimated, it is believed that twenty-five per cent of patients disabled with physical symptoms have important emotional involvements. These factors are thought to be important in the etiology, accentuation, prolongation, or delay of convalescence in a quarter of the cases that come to doctors for help.

A quarter of fifteen million hospital patients approaches the four million mark. Twenty-five per cent of over fifty million clinic patients is over twelve million patients.

All this runs into high figures budget-wise, when you think of hospitalization as costing from fifteen to thirty-five dollars a day, and out-patient visits as costing the community several dollars a visit. A specialty clinic in one hospital with which I am familiar costs the community eight dollars per visit—over \$100,000 per year. Psychological and stress factors account for a significant part of the over fifteen billion dollar medical bill of the country. The drug bill, I believe, amounts to two billion dollars. Not all of this is going for the relief of physical pain; perhaps a quarter or more, estimated conservatively, or \$500,000 would go for the relief of worry, tension sleeplessness, discouragement; in short, psychological distress. The

Read before the Association in annual session, Mobile, April 18, 1957.

eight billion dollar alcohol bill for the country goes not alone for the purposes of conviviality and the enhancement of social intercourse, but a significant part goes toward the buffering and alleviation of stress. And delinquency is certainly a community matter. It is rising at rates of ten to seventeen per cent in some areas of the country. Psychological and emotional factors are involved, for which the general practitioner is often first consulted. Family stresses and disintegration are frequently blamed for delinquency and crime. Family stress will issue in divorce for seventy million of our citizens in the course of the present life span of an American.

All these figures are larger than the purely psychiatric figures of one million patients in our mental hospitals annually and a billion dollars annual expenditure for care and treatment. Three and one-half or four billion dollars are lost in productivity and tax income for the country.

Thus the medical figures, the social and economic ones are larger and more important than the statistics usually thought of as psychiatric.

This means that whether he wills it or not, the practitioner of medicine and surgery is deeply involved with psychological and psychiatric problems in his daily practice. Although the ten thousand psychiatrists (less than five per cent of physicians) are taking care of fifty per cent of the occupied beds of the country, doctors in general are increasingly going to have to devote part of their time and thinking to psychiatric problems and practices. There never will be enough psychiatrists to take care of the psychiatric job in the country. More buildings for state hospitals and increased recruitment of psychiatrists are not the answers. The economic structure of our country,

I believe, will never be able to support housing and personnel needs using old concepts and methods of treatment. The newer drugs are requiring physicians in general to treat psychiatric conditions, and the public is demanding it. There is no reason to think that further research will not produce newer and more effective drugs.

Newer drugs, the increasing number of psychosomatic conditions, and the increased understanding of states of stress will throw an increased burden of psychological guidance, counseling and therapy on physicians at large. All this will not lessen the need for psychological understanding and wise guidance.

The triumphs of the laboratory medicine of Pasteur, Virchow, and Koch have lessened many of the ravages of infectious diseases and their sequelae—scarlet fever, diphtheria, typhoid fever and venereal disease. Infant mortality and the loss of mothers from the infections of childbirth have decreased. Life expectancy has greatly increased.

The killers today are strokes, coronaries and cancer. It may be that stress enters into the first two more than we have realized. Stress diseases are on the increase—ulcers and rheumatic conditions, just to mention two.

Stress diseases are receiving increasing attention. New concepts have become evolved on the basic work of Cannon, Selye, Wolf and Wolff. Not just an organ or system is the source of disturbance, but the whole organism. With the stress of continued worry, fear, frustration, disappointment, the whole organism is involved—both psyche and soma, both organs and the person. Competition, success, acquisition, prestige are increasing characteristics of our culture. Stress and strain are part of daily living. Pain-tolerance and symptom-proneness are increasingly important in a society in which stresses are mounting. From his studies Freud concluded that proneness to neurosis and psychosis had its origin in the early life of the individual in his family.

Pavlov, Lidell and Gant have shown that new concepts of bodily disturbance must be thought of. Experience and conditioning can permanently disturb the whole organism. Etiology is no longer linked exclusively to infection, toxic substances, trauma, tumor, degeneration and deficiencies.

Stress disturbs the whole organism—physiological as well as emotional. Psychological situations, conditions and circumstances can be so overwhelming or so continuous that the individual is unable to master the situation without disturbing the balance, organization or homeostasis of the organism. The reaction may be chiefly physiological through the cortex, the hypothalamus to the pituitary, to the adrenal cortex, to the electrolytes, to the cells—as, for example, the connective tissue

in rheumatic conditions or the bronchiolar musculature and secretory cells in asthma, or the dermal cells in neurodermatitis. The reaction may be psychological or social—withdrawal, depression, intolerable anxiety, aggressiveness, phobia, rebellion or antisocial behavior. Circumstances block the individual's adaptations whether on the physiological or psychological level. Illnesses, operations, accidents, financial and family disasters, domination or overprotection to the point of crushing individuality interfere with normal growth. They prevent the development of skills and satisfactions. They generate insecurity, helplessness, dependency. These are etiological matters of importance in emotional illness, psychosomatic conditions, mental disorders. Much of this is beyond the control, desire, or will power of the individual. It is happenstance rather than volition or poor judgment, as so many have felt.

From this sketch of the etiology of much suffering and illness, certain inferences can be drawn that have importance for therapy. The illness has arisen through circumstances, not individual selection. It has happened unwittingly, not through reason. It is not the individual's responsibility; it is circumstances and history that are responsible. Will power and reasoning and moral weakness have not been at fault. Escape, wanting to be ill, malingering are concepts which I have found of very little significance in less than five per cent of the people I have seen. All this has implications for therapy. Reason and will power are relatively impotent before the great emotional forces of insecurity, fear, resentment, distrust, lack of love (id), on the one hand, and the forces of custom, habit, culture, expectation, prejudice and projection on the other. The irrational forces of emotion, custom, cultural association, parochialism, are the forces that are disturbing the ideas and reasoning of the patient.

Experience has caused the illness. New experience is needed, through therapy, to counter harmful experience and effect alleviation or cure rather than reasoning, explanation, condemnation, shaming, humiliation.

A young lady of twenty-five years of age had been ill for twenty-two years with eczema and asthma. From the medical point of view, from the chemical and drug aspects, from the viewpoints of allergy and immunology, she had had all the treatments that this country and Europe had afforded. My first effort psychologically was to try to understand the patient, as well as the disease. It seemed to me, after a careful review, her life essentially lacked security. Her mother had preferred a boy two years older, and rejected her from birth. Her mother had suicided when she was two years old. Her father was alcoholic. All the family grew up in wealth in one of the oil re-

gions of the country and rather unfeeling governesses were added to the rejecting parents. At twenty-two she had several attacks of asthma when the allergist thought she might die. Along with the exacerbations of asthma came florid outbreaks of eczema.

It seemed to me the basic, primal, outstanding need of this patient was for security. The chief direction of my therapy, therefore, was to see her and be with her and have her feel I was behind her and trying to help her, whether it was for five minutes a day or fifty minutes a day, or a wave of the hand in the hall of the hospital, or a phone call when I could not see her for several days. We talked about anything and everything, not just medical matters, such as symptoms, discomforts, fears and medications. We talked of what she read, what was on her mind, what movies she had attended, her reactions to them, what gave her satisfaction, what disturbed her, what made her secure and what gave her apprehension. What were her goals in life and what had been her disappointments. A discussion of novels, poetry, movies, magazine articles, stories and plays around these themes. She dealt with her problems in such discussions without conscious awareness or self reference. The expression of identification, preference and dislike in such discussions helped develop security and wear down apprehensions and resentments. They helped her unconsciously move into more effective and secure ways of acting, feeling and thinking. With very severely ill patients it is thus possible to help by such a mutual relationship in what seems an informal way, without a direct attack or probing. Instead my effort was to build a solid, secure relationship with her, not just on the basis of medical understanding, direction and reassurance. Sometimes she sat on the floor under a table like a frightened deer. She might not make a remark for fifteen or twenty minutes. At other times there were great tides of emotion, with tears or bitterness. Not infrequently I sat on the floor near her and talked to her while she played with my pen or paper. The essential thing was to establish a friendly, warm, human contact with this frightened, alone, distraught young woman. Eventually, after about two and a half years, she got well. At least the severe asthma and the dermatological crises disappeared and have not reappeared for ten years.

I think my management of my relationship and experience with her had something to do with her recovery. I do not believe that without some kind of rational treatment based on an understanding of her personality, her experiences and her needs, she would have gotten well. She is married to an engineer. She has been married for six years. They are getting along well. This was social ther-

apy, psychological therapy and emotional therapy. Drugs were used as sedatives and hypnotics. We should not hesitate to move into therapy on a number of levels. We cannot attribute her cure to environmental therapy because she had been sent away from home many times before. The essential therapy was not chemical, was not drugs. She needed a secure relationship with another human being. The control aspect of therapy came through her respect, regard, and need for what the therapist could offer her—not through authority. There was the opportunity to express and release her feelings, thoughts and attitudes unreservedly, because she knew she would be respected and not condemned because of difference or infantile withdrawal, irritability or intolerance. Throughout all this there was a constant effort to help and seek out new solutions, new attitudes and new opportunities.

Information, knowledge, retrospective reconstruction of experience into a diagrammatic representation of the development of the condition is often helpful. It is not universally so. It may be disastrous. Experiences and relationships in the past may have been so dark and disastrous that re-examination and reconstruction may be destructive. What is needed, then, is the development of new relationships built on what is left of constructiveness in the individual.

The important job of the therapist is to tap the constructive potentialities of the patient and facilitate his realization and activation. Therapy consists in procedures and efforts to eliminate the handicapping fears, resentments, distrusts and distortions that overpower patients and release their effective creative, rational and social potentials.

Psychotherapy from this point of view is setting the stage or affording opportunity for individuality to grow. It is an experience not limited to words. Attitudes are more important than words. The first step in this is to help the patient develop freedom of communication. Freedom of speech helps develop security and a constructive therapeutic relationship.

Psychotherapy is an experience, not an intellectual exercise or discussion. It is a relationship with another human being—the therapist—in which the latter helps the patient tap his own creative, dynamic possibilities. It is a feeling relationship. It is related to aesthetic experience. It is a conditioning experience like that of the athlete getting into condition. It requires much practice, and trial and error. Reconditioning requires time. This is one of the reasons why psychotherapy is often so exasperating, time-consuming and expensive. The therapeutic experience is like the creation of a work of art.

The intellectual aspect, I believe, is secondary.

It is of the nature of exploration, adventure and discovery. It is a growth experience. It is not just intellectual and the development of insight. Many people get well without insight; many people acquire insight and do not get well.

Psychotherapy, to me, consists in the efforts and procedures to help people handle their feelings, motivations and behavior more effectively. It recognizes the impotence of reason, logic, and will power before the great streams and surges of emotion which lie behind much emotional and mental illness. Reason is often a fantasy, a wish, a compensation, a defense to balance unreason, a consolation, even on the part of psychiatrists at times. It is a hope and dedication but it is not the last great hope of man. It sees the limitations of insight. The handicaps of urging and exhortation are recognized. The personal nature of strong efforts at persuasion awakens resistance. Much suggestion is contrary to fact. Domination, authoritative direction (except in severe and dangerous conditions), dogma, projection, intellectualization, pontification, have great limitations.

Identification, interest, patience, considerateness, respect, efforts to understand, efforts to help, hope, the discussion of possibilities, the raising of questions and alternatives—these are creative in human relationships and stimulate the constructive resources of individuals, whether this is called the tendency to grow or survive, elan, libido or Eros. The therapist stands for the constructive, the creative, Eros disciplined by experience, science, suffering and relationships with others. This is opposed to Thanatos, or the destructive elements in human nature. And pure reason without feeling, without feeling through identification, without efforts to help, explore and solve, often leaves the patient paralyzed in contemplation, introspection, confusion or despair. Reason needs to be energized by the constructive feelings and attitudes of the therapist. The healing influence of interest; the relief from talking things out; the resources that develop from mutual exploration and discussion are forces in psychotherapy that are deeper than words and logic.

Physicians who are not psychiatrists can do a great deal in helping patients in the psychological aspects of illness if they are aware that, fundamentally, sympathy, considerateness, respect, support and understanding are, as they always have been, therapeutic tools of the greatest effectiveness.

The 17th annual convention of the Gulf Coast Clinical Society will be held October 17 and 18 at the Buena Vista Hotel in Biloxi, Miss.

Guest speakers include men prominent in medicine, with subjects of general interest.

Olympic Winners Overcome Physical Handicaps—
Two Olympic gold medal winners have proved it is possible to completely overcome severe physical handicaps.

Harold V. Connolly, 25, won a 1956 Olympic gold medal in "one of the tensest hammer throwing competitions ever staged," even though he was born with a partially paralyzed left arm. This disability served as a strong incentive for his outstanding athletic performances, according to Dr. Ernst Jokl, Lexington, Ky.

Karoly Takacs, 46-year-old Hungarian, became as good—or even better—a pistol shooter with his left hand as he had once been with his right. An international champion pistol shooter with his right hand, Takacs lost that hand after an accident in 1938.

Within eight months, he was shooting with his left hand, and in 1939 he won the world championship at Lucerne, Switzerland. He won gold medals in the 1948 London Olympic games and the 1952 Helsinki games, and competed in the 1956 games at Melbourne.

Dr. Jokl, who examined both men at Melbourne, said the excellence of Takacs' athletic performance is so great as to place both his preamputation and postamputation attainments in "a class of their own."

Writing in the September 14 Journal of the American Medical Association, Dr. Jokl, who is associated with the Kentucky Rehabilitation Center, Inc., University of Kentucky, said Takacs' case proves it is possible for the nervous and muscular systems to "relearn" a lost skill. In fact, it is possible for an entirely different part of the body to learn a skill formerly confined to another part.

Takacs' case is especially interesting because it involves not only the motor aspect of performance but also the integration of touch, vision and equilibrium, Dr. Jokl said.

Takacs' case emphasizes the part played by a central pattern of nervous and muscular skill in that it was possible for him to switch from one side of the body to another.

It also raises the question of whether some cerebral factor underlying his extraordinary efficiency before amputation also explains the ease of transfer to the other hand, Dr. Jokl said. In other words, he wondered if Takacs wouldn't have been a great pistol shooter regardless of what had happened to him.

Connolly's underlying motivation for prolonged training is "rational in terms of his personal objectives, dignified in execution, and . . . of a high order of maturity," Dr. Jokl said.

Connolly suffered a birth injury. His left arm is shorter and weaker than the right and is partially paralyzed.

The disability presented him with a difficult psychological and social problem in childhood. However, he resolved to overcome the handicap, and set out to study different types of athletic training. Later he consulted several European coaches and former Olympic hammer throwers.

He trained extensively and took up weight lifting to strengthen his arms. In the process, he greatly strengthened the right arm and to a lesser extent the left. He became the first American since 1924 to win a gold medal in hammer throwing. He holds the world records of 224.10½ feet for the 16-pound weight and 66 feet, 8.5 inches for the 35-pound weight.

THE MEDICAL COLLEGE OF ALABAMA

1957 PROGRESS REPORT

ROBERT C. BERSON, M. D.

Dean of the College

Birmingham, Alabama

A year ago I had the privilege of addressing this Association at its annual meeting in Birmingham and the editor was kind enough to include those remarks in the September 1956 issue of the Journal of the Association. At this time, I hope to bring you up to date on some of the aspects of the institution that recur from year to year, and then spend the rest of the time allotted to me telling you of certain very large issues that require decision and action in the immediate future, and constitute a crisis for the Medical College.

STUDENTS

The annual supply of interested, well-qualified students is naturally of fundamental importance

Comparison of Applications to Acceptances in United States Medical Schools.

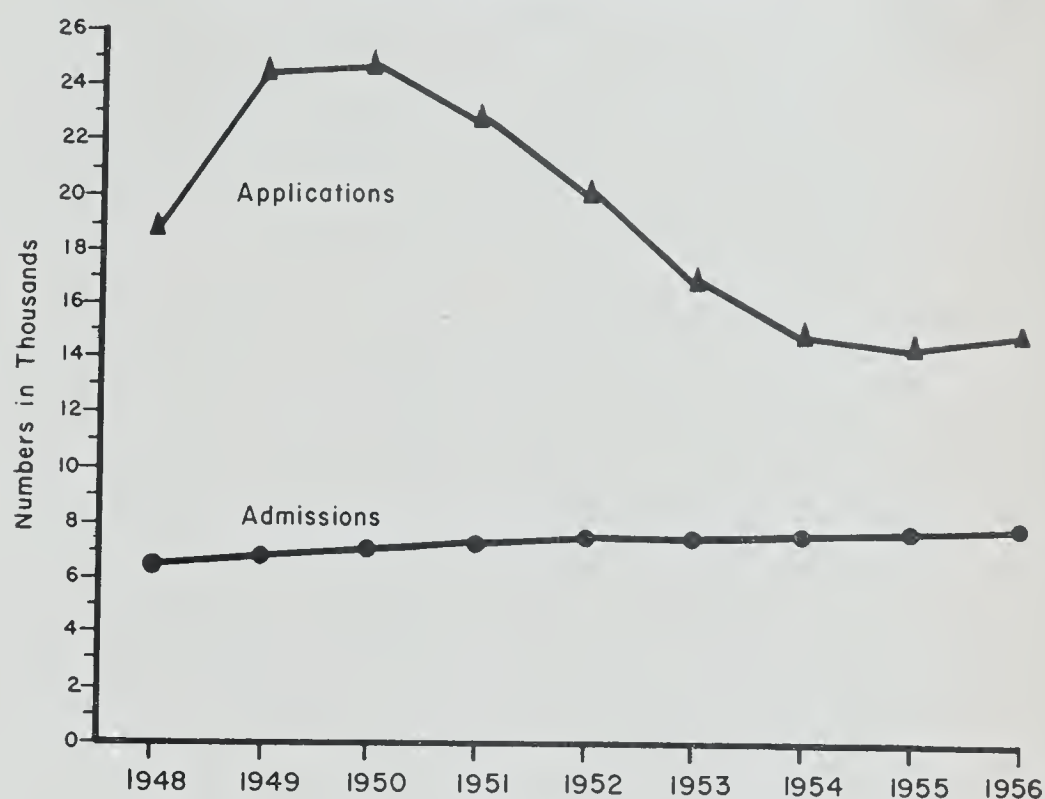


Fig. 2

them is living up to his early promise and doing good work.

As shown in Figure 3 the number of students who drop out of school for all causes continues to vary a good bit from year to year. While this number is small it is nevertheless disturbing that from our supply of applicants we are not able to select 80 students who have sufficient industry

Comparison By Year of Number of Applications, University of Alabama College of Medicine, To Number of Students Dropped.

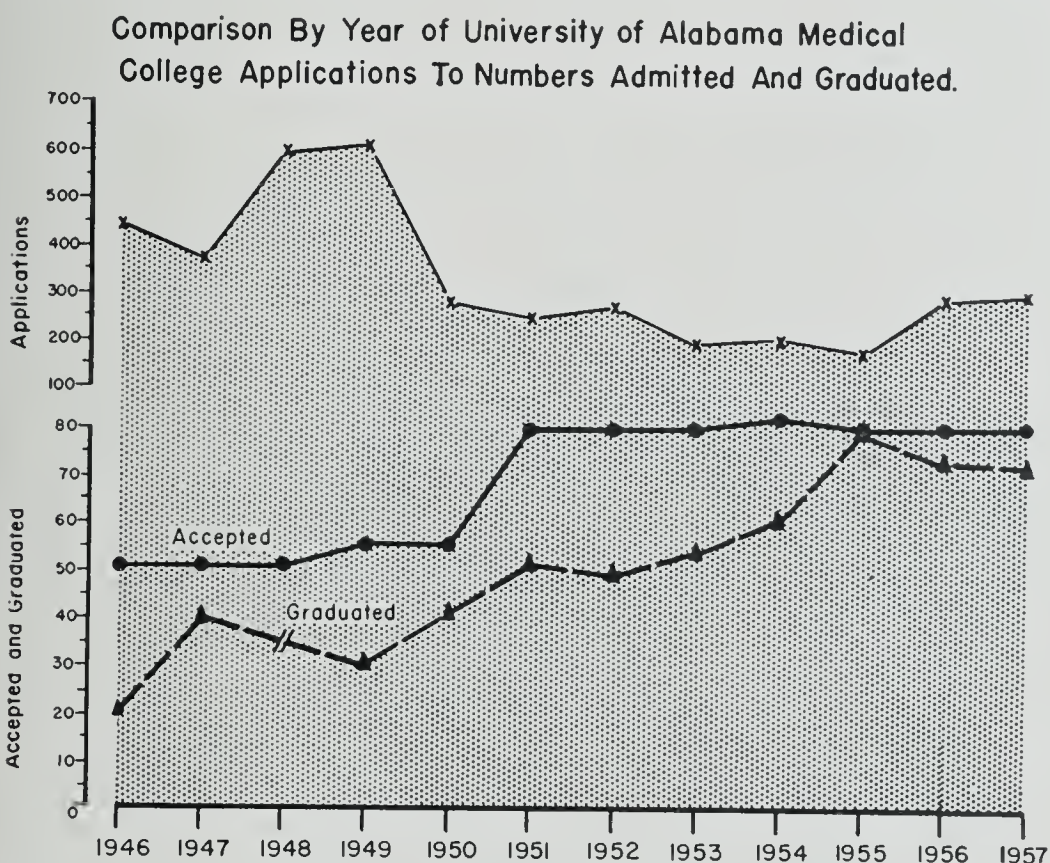


Fig. 1

to the Medical College. As shown in Figure 1 the number of applicants has changed but little, going from 292 in 1956 to 294 in 1957.

As shown in Figure 2 there has also been but little change in the national supply of applicants to all medical schools.

You will recall that at its commencement meeting in 1955, the Board of Trustees of the University approved a policy of continuing to give preference to residents of the state of Alabama but making that less than an overriding preference and accepting a small number of extremely well-qualified out-of-state students. In the class of 1956, four out-of-state students were accepted and I am happy to say that so far in the school year each of

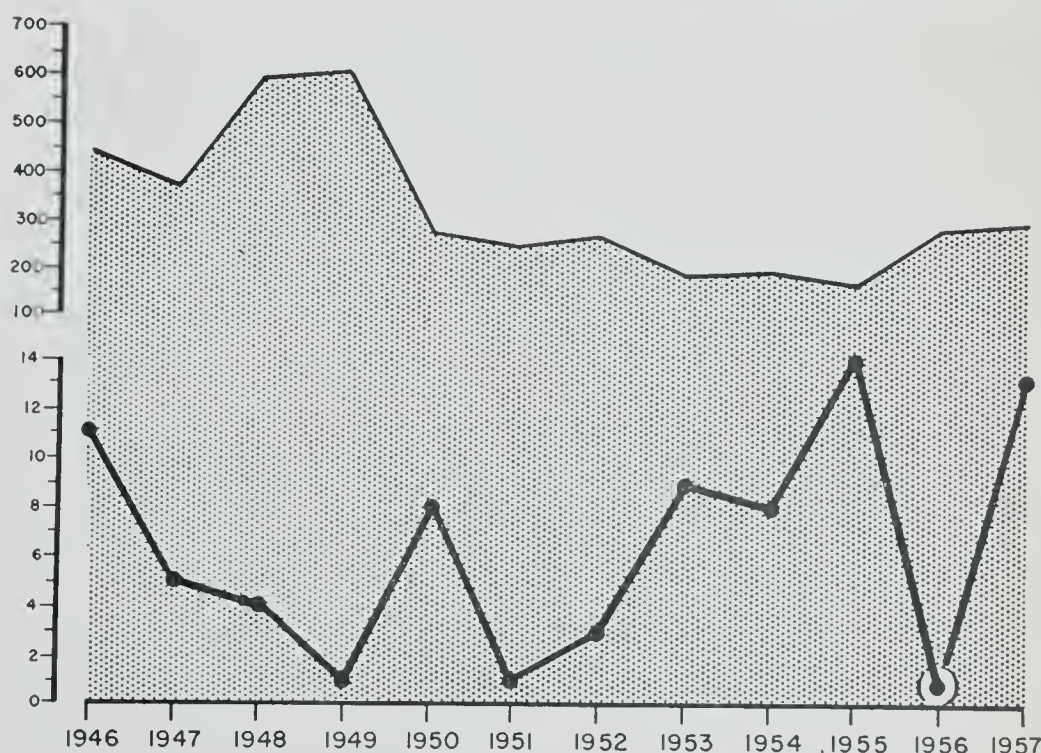


Fig. 3

and ability to be successful in the program and stay with it. Of the 10 students who dropped out of the first-year program in this school year, 3 did so because of insufficient interest, 2 became ill, and 5 had to be dropped for academic reasons.

Read before the Association in annual session, Mobile, April 19, 1957.

The policy of requiring each student to take Parts I and II of the examination of the National Board of Medical Examiners has been placed in effect. So far, we have the results on only one class each in Parts I and II. While it is too early to place much confidence in interpretation of these results, there is nothing about them that justifies any complacency on the part of either the students or faculty. It is planned to continue this policy and we hope within a very few years to have this objective way of comparing our students' performance with that of students from other medical schools throughout the country.

FACULTY

In the basic science areas of anatomy, biochemistry and physiology and pharmacology, microbiology and pathology, there have been few changes among the faculty. Dr. Robert D. Francis did join the Department of Microbiology and Dr. Harwell Davis, Jr., did join the Department of Pathology. On the other hand, Dr. Lewis Graham left the Department of Pathology to go to the Druid City Hospital in Tuscaloosa.

In each of these areas a long range problem arises from the fact that so few talented and dedicated young men are deciding to make their careers in these basic areas that it is difficult to see how these important departments can be adequately staffed in the years to come. Our institution continues to be relatively fortunate in this regard, but it would be difficult indeed to replace most of the good men we have now if anything happened to them.

In the clinical departments there have also been few changes among the faculty. Drs. Thomas Lombardo, Lloyd Heffner and Duke Thomas did join the Department of Medicine as instructors on a one-year basis, but, on the other hand, Dr. Richard Bing resigned to accept a position at Washington University in St. Louis. Dr. L. M. Barger has joined the Department of Pediatrics as an instructor and Dr. Rex Perkins has joined the Department of Surgery as an assistant professor.

In order to meet fully the educational and service load of the institution it is highly important that a few more permanent men be added to the Departments of Surgery, Pediatrics and Psychiatry and that a beginning be made toward building up a full-time nucleus in the Department of Obstetrics and Gynecology. At the present time there would be some difficulty in making budgetary provisions for these new positions, but a much more serious problem is that it would be literally impossible to provide academic space for these additional faculty members if funds were available. I will have more to say about this large problem a little later on.

INTERNSHIPS

As many of you know, there has been serious concern and discussion all over the country about the proper design and conduct of the internship. The House of Delegates of the American Medical Association and the Council on Medical Education and Hospitals have both devoted much time and study to this question and there is still not complete agreement.

This national concern arises only in part from the fact that there are each year approximately twice as many positions for interns as can be filled by the graduates of American medical schools. Also involved is the serious and difficult question of just what type of hospital experience best prepares a young physician to be a generalist. Until about the time of World War I a great many physicians went directly into practice after medical school with no hospital experience. Many thoughtful people became so convinced that an internship greatly increased a physician's ability that a good many things were done to encourage young physicians to take internships, including the policy in some medical schools of not awarding the M. D. degree until after the internship was completed and the policy in many states of requiring internship prior to issuing a license to practice.

Since that time, not only has it become customary for all physicians to take an internship but a very large percentage of recent graduates take additional years of hospital training of one sort or another. By now a good many people are convinced that it takes something more than a one-year rotating internship to prepare a young physician fully for general practice. In addition, the clinical clerkships in the third and fourth years in most medical schools bring the medical student into intimate contact with patients on each service in the hospital and his work with patients is so similar to that done by a rotating intern that the students themselves are frequently able to see little difference.

Something more than two-thirds of the graduates of our medical school accept internships in other than the University Hospital each year, so this broad problem of the design of the internship is shared by very many hospitals throughout the state and the nation. However, the total program of the University Hospital is such an integral part of the educational setting of our students that it is very important that the internship in that hospital be one designed to meet the needs of our graduates, the whole institution, and the state.

Traditionally, the hospital has offered and supported primarily twelve-month rotating internships. In addition, in several recent years, straight internships have been offered in pediatrics and

medicine. The fact is that with definite educational and professional responsibilities in the Children's Hospital of Birmingham, the Crippled Children's Clinic and the Birmingham Veterans Hospital, it is difficult to justify the assignment of interns on a twelve months' rotation to those institutions for any significant period of time. In addition, the period of time that it is possible for each of these individuals to spend on each service is so short that it is difficult for the service to give the individual educational experience much beyond that of the senior medical student, for the individual to know the service well enough to know whether he wishes further training in that field, or for the people in charge of that service to become very well acquainted with him as an individual.

For a variety of reasons, the internships in the University Hospital have varied considerably in their popularity with graduating students.

The Intern Committee of the faculty has given much time and thought to this problem in an effort to decide what pattern of internships in our institution would best meet the needs of the graduating student and of the institution. The internship should provide a sound foundation for the physician desiring to go directly into general practice thereafter, as well as a sound foundation for those other physicians who decide to go on with further training. At the present time, no decision has been reached but serious consideration is being given to the establishment of a two-year rotating internship in the University Hospital as the pattern best meeting the several needs.

OPERATING FUNDS

The Medical College needs continuing financial support. At the present time there is clear need for adjusting upward a few salaries and for adding a very small number of additional people to the faculty. These needs can, however, be well met by an increase in the appropriation from the state of approximately 10 per cent. There is a well-marked educational need for going further and adding additional people to the faculty but as mentioned above this cannot be accomplished in the next fiscal year because there simply are not adequate academic facilities to attract first rate men even if budgetary provisions were made.

FINANCING THE CARE OF INDIGENT PATIENTS

The crucial problem in the operation of the Medical Center as a whole is, as it has been, that of financing the care of indigent patients in the University Hospital. There has been no improvement in this problem since I addressed the Association a year ago. It is true that Jefferson County has agreed to advance its payments for the care of its indigent patients from \$11.00 per patient day to \$12.00 per patient day, but at the same time to

reduce the amount of service purchased from 70,000 patient days to 68,000 patient days. In the meantime, the actual cost of operating the hospital has risen approximately \$1.50 per patient day to \$21.85 per day. Because the hospital must absorb more than half a million dollar deficit in the care of Jefferson County indigent patients each year it continues to be necessary for the hospital to maintain a very high rate of occupancy by paying patients and, instead of using the funds from that source to improve its services, divert those sums into offsetting the deficit in the care of indigent patients. This has two tremendously unfortunate results. One is that the hospital does not have the financial resources with which to bring the salaries which it pays to all of its employees to anything like the levels the same individuals would receive in other hospitals in our city. This naturally results from time to time in the loss of valued employees and low morale on the part of those who remain. The second is that it has not been possible for the hospital to accept large numbers of properly referred indigent patients from throughout the state.

Not only has this been an almost impossible situation ever since the University took over the operation of the hospital but also costs for many varieties of goods and services which the hospital cannot control have risen to such a point that a basic solution to the problem is imperative if the hospital is to remain in operation at all.

It is of tremendous importance that as the primary educational setting for the clinical experience of all the future doctors of this state the hospital be a daily example of the most considerate and intelligent study and treatment of patients and also that the hospital cooperate with practicing physicians throughout the state by accepting their properly referred indigent patients who need the care of a large specialized hospital.

A request has been made that the Legislature provide the funds for the hospital to operate 200 of its beds for properly referred indigent patients from throughout the state and that provisions be made which will permit Jefferson County to pay actual costs for those of its indigent citizens for whom it has assumed responsibility. This Association has had a committee studying this subject under the chairmanship of Dr. John Paul Jones, the Jefferson County Medical Society has had a committee under the chairmanship of Dr. Garber Galbraith, the Alabama Hospital Association has had a committee on the same problem, and there has been an interim committee of the Legislature studying the whole matter of the needs for indigent hospitalization throughout the state. The state-wide needs are of tremendous importance and should be met at an early date. An integral

part of that future state-wide program should be the University Hospital acting as a base hospital receiving properly referred indigent patients from all over the state and conducted on such a sound financial basis that it can provide a suitable educational setting for future physicians.

FACILITIES

Our Medical College has only been operating on a four-year basis in its present location since 1945. Only two large steps have been taken toward providing appropriate facilities. The first of these amounted to Jefferson County turning over to the University all of the old and new Hillman Hospitals, the Clinic Building, the Nurses' Residence, and the Jefferson Hospital in the hospital block. These buildings had been constructed at different times at a total cost of approximately three million dollars. The other step was taken when, in 1951, the buildings housing the basic science departments and the dental clinics were occupied. These facilities were constructed largely from funds appropriated by the Legislature, somewhat augmented by funds from the Hill-Burton program. The total cost of these buildings occupied in 1951 was approximately 2.0 million dollars.

It is not surprising that our institution still has very large needs for facilities, particularly when one considers what sister states have been doing to provide for their medical schools since World War

of the clinical departments. This facility is needed to improve the hospital's ability to discharge its service function and to provide an environment that will make it possible to hold together and to attract a first-rate faculty. The University Hospital was constructed in several stages and for completely different functions than those it now fulfills. At the present time it is forced to operate with only 485 square feet of total space per patient. A reasonable normal for an acute general hospital would provide 600 square feet of space per patient and in the University Hospital there should be even more space. This overcrowding does not result primarily in the patients' beds being too close together, but it does result in each of the service departments of the hospital, such as x-ray, laboratory, dietary, and the like, being far too crowded to function properly. The employees who have to work in these areas are frequently unwilling to accept the overcrowding and inefficiency that are inevitable, with the result that it is almost impossible to recruit and hold enough trained people in many of these special departments for the care of patients to be conducted satisfactorily. At the same time, a good bit of the space in the older hospital buildings is being used up in inadequately meeting the academic needs of the faculty in the clinical departments.

NEW RESEARCH BUILDING

The academic facilities we can offer to full-time members of clinical departments are so inadequate that each of these men is making a real sacrifice. It is not likely that the Medical College of Alabama will ever be able to offer salaries that are significantly above those offered in similar institutions. The first rate men that we all want to see in the full-time positions can accept salaries and total incomes that are less than they would readily make in private practice but an inducement of major importance to them are facilities that make

Capital Expenditures of Some Southern Medical Schools Since World War II	
Mississippi -----	\$12,000,000
West Virginia -----	18,000,000
Arkansas -----	18,000,000
University of Florida -----	18,000,000

Fig. 4

II. As shown in Figure 4 Mississippi has expended \$12,000,000.00, West Virginia \$18,000,000.00, Arkansas \$18,000,000.00, the University of Florida is expending \$20,000,000.00, all in making provisions for their medical schools.

UNIVERSITY HOSPITAL

There is a most urgent need for additional academic space, particularly for the clinical departments, and there is a golden opportunity to meet that need at the present time by constructing a research building to house the academic functions

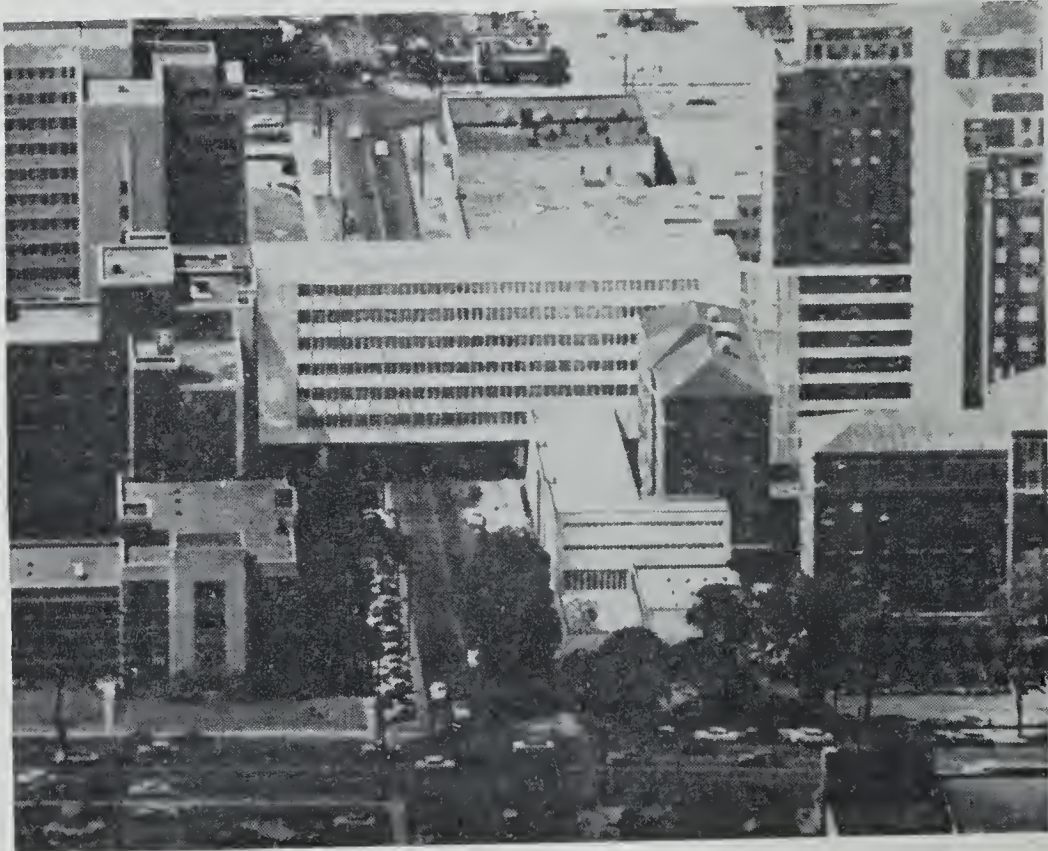


Fig. 5

it relatively easy to carry out academic pursuits that would be difficult in a busy practice. Research is not, nor should it ever be, a primary objective of the Medical College but rather a necessary inducement to most of the faculty and an activity enriching the intellectual environment for students, interns and faculty. A large contribution to the space problem of the hospital and an almost complete solution to the problem of academic space for the clinical departments can be achieved through the construction of the research building in Figure 5.

This building will form a functional bridge between the hospital and the basic science departments and it should provide fairly adequate academic space for all of the clinical departments as well as expanding some central functions such as the animal house. As you can see, it will be constructed on land already owned by the University.

The National Institutes of Health have taken an interest in the needs of the Medical College and have sent a team of distinguished scientists to visit us and review our needs and plans and have agreed to provide 50 per cent of the total cost of this building or \$1,033,500.00 provided the University can provide the other 50 per cent and construction can be gotten under way before the end of the present federal fiscal year. Careful exploration has revealed that it may be possible to get the deadline extended until sometime late in August, but it is perfectly clear that if the Medical College of Alabama is not able to match this very generous federal grant before the final deadline arrives, the National Institutes of Health will find it necessary to grant the funds to some other institution.

The funds for operating this building present no difficulty because in the present fiscal year a grant and contracts for research coming to the Medical Center will run somewhat more than \$600,000.00. When this facility can be completed and occupied, it is virtually certain that grants and contracts for the support of research will increase considerably. Already the National Institutes of Health provide 15 per cent of each grant for general overhead and there are strong indications that this allowance for overhead may be increased.

The crucial situation is that if the Medical College can find the funds with which to match the federal grant, the state of Alabama is in a position to put up slightly more than a million dollars, immediately attract a matching amount from the Federal Government and look forward to attracting into the institution each year probably as much as a million dollars for the support of research. This facility will at the same time make real headway with the hospital's severe space

problem and provide a very fine setting for the faculty in the clinical departments. But the time for the decision and action is virtually upon us.

The University has requested the Legislature to provide funds with which to match this federal grant for construction.

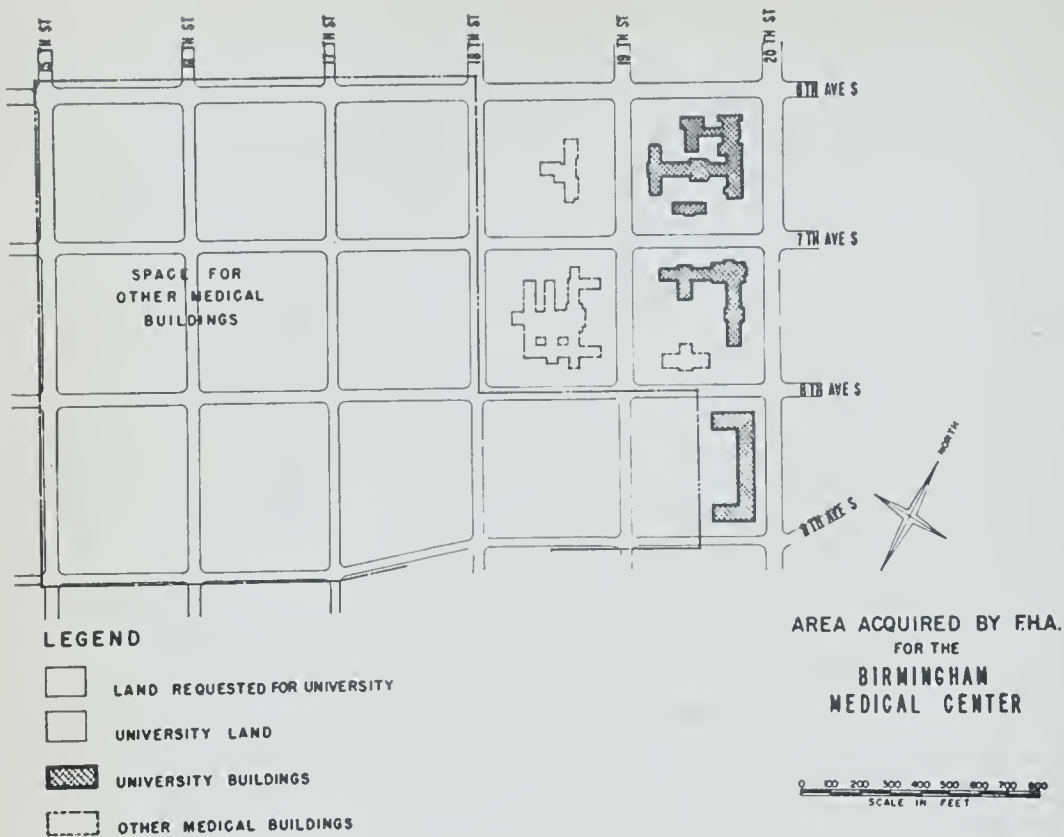
LAND ACQUISITION

A second major element involving the long range development of facilities for the Medical Center also requires very early decision and action. As you know, the Housing Authority of the Birmingham District has for several years been engaged in acquiring approximately 10 blocks of land adjoining the Medical Center in a program designed to clear a slum area and to provide space for the long range development of an integrated Medical Center.

The Housing Authority has now acquired the title to all of this land. Innumerable discussions and negotiations between the University, the Housing Authority, the officials of Birmingham, the Administration of the state and many public spirited citizens has resulted in general agreement that it is in the public interest for the Medical Center as an agency of the state to acquire all of this land from the Housing Authority and then to make it available not only for the development of facilities by the University but for the development of other appropriate agencies. For example, the Children's Hospital of Birmingham has decided to construct its new facilities on one of the blocks of this district. It is probable that other non-university groups will develop plans which should be carried out in this general neighborhood and, of course, in the future the University will need to develop housing and other facilities for students as well as better facilities for ambulatory patients.

The laws and regulations which govern the action of the Housing Authority require that it receive the appraised value of the land. The appraisals have been completed which indicate that the total purchase price for all of this land will be \$2,765,520.00. This price is far less than the Housing Authority had to pay for the land because the Housing Authority Program is subsidized by the city of Birmingham to the extent of \$500,000.00 and by the Federal Government to the extent of \$1,000,000. The University has been making every effort to work out some kind of plan for purchasing this land subject to a vendor's lien or any other device that will insure the availability of the land for the development of medical facilities. The fact is that the Housing Authority's time table requires that they make some disposition of the land in the relatively near future.

The University has requested that the Legislature provide the funds with which to purchase this



land out right. What action will be taken on that request is, of course, not known nor is it clear whether the University itself without such legislative action can in fact work out a suitable legal means of keeping the land available for future developments.

It is, of course, tremendously important that some means be found to keep this land available for future development, because it is not likely that an opportunity will ever come again to acquire adjoining property under such favorable conditions.

NURSES' HOME

A third very pressing need for facilities is for a much enlarged residence for student nurses so that more nurses can be trained to meet the increasing shortages throughout the state of Alabama. In 1947 a survey conducted by the U. S. Public Health Service estimated that to meet the need for nurses in the state of Alabama it would be necessary to graduate the number of nurses each year as shown in Figure 7. The second column in this figure shows the number of students actually graduated in each year through 1956, and that there are only slightly more than 800 students currently enrolled in all of the schools of nursing in the state. Between now and 1960 it will not be possible to graduate any larger number of nurses than the total number already enrolled. So, by 1960, this state as a whole will have cumulative deficit of 10 thousand nurses under the total estimated as needed by that survey. I am sure that virtually each member of this Association has daily experience with the tremendous shortage of nursing help throughout the state.

The University Hospital School of Nursing is in the somewhat unusual position of having more applicants who seem entirely acceptable than can enroll. The supply of clinical material is adequate

Need for Graduates in Nursing in Alabama
(USPH Survey)

Year	Projected Needs	Actual No.
1953	1100	285
1954	1700	283
1955	1800	294
1956	1900	243
1957	1500)
1958	1600)
1959	1600)

Current total enrollment in all schools - 846

Fig. 7

in numbers, the faculty already on hand could carry a considerably larger class, but the nurses' residence which we have is now filled to the rafters. The supply of clinical material, the faculty, and qualified students indicate that we could expand the class to approximately 100 in each class as soon as additional residential facilities are made available.

As you know, the construction of nursing schools is legally eligible for assistance under the Hill-Burton program so that substantial financial help might be obtained from that source. Tentative plans already made indicate that we should have a residence for approximately 400 students and that should be designed for future expansion as needed. The estimated total cost of this facility is \$2,100,000 and if 2/3rds of the total was supplied through Hill-Burton funds it would be necessary for the University to have 3/4 of a million dollars for this purpose.

If we are ever to begin to catch up with the shortage of nurses a beginning will have to be made. And, of course, a larger class will not be graduated and actually go to work until three years after it enters. For these reasons, it is decidedly in the interest of the general public and the medical profession for the funds necessary for a larger nurses' residence to be made available as soon as possible.

SUMMARY

In summary, it seems reasonable to report to you

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that your Medical College is in approximately as strong a condition as it was a year ago. We continue to need your interest and understanding support in encouraging interested and talented young people to prepare themselves for a career in medicine and seek admission to the Medical College and also encouraging interested and talented people to choose careers in the basic science areas.

The future progress and even stability of the Medical College will be drastically affected by what progress can be made at solving the long standing dilemma of the financing of the care of indigent patients. And whether this is to be a great medical school, or to have a hard time carrying on in any manner, is largely dependent upon whether or not funds can be supplied to match the

federal grant toward the construction of academic facilities for the clinical departments.

Whether ample room for the long range development of an integrated Medical Center will become available or not is heavily dependent upon whether the legislative session that begins next month provides the funds with which to secure the land now owned by the Housing Authority. And your Medical Center can greatly increase its contribution to the shortage of nurses if some means can be found to provide funds with which to greatly expand the capacity of the nurses' residence.

Toward these objectives, the members of this Association can be enormously helpful through encouraging the members of the Legislature to provide the funds for these purposes.

CONGENITAL TRACHEO-ESOPHAGEAL FISTULA WITHOUT ATRESIA OF THE ESOPHAGUS

A CASE REPORT

BENJAMIN P. CLARK, M. D.

and

J. O. MORGAN, M. D.

Gadsden, Alabama

In 1953 the authors reported a series of six cases of congenital atresia of the esophagus seen in a small general hospital over a period of five years.¹ Five of the cases were associated with a congenital tracheo-esophageal fistula. To this series we would now like to add a case of congenital tracheo-esophageal fistula without atresia of the esophagus.

This lesion is a rare anomaly. Ware and Cross² have recently reviewed the literature and found twenty-six reported cases. To these they have added one of their own. Thirteen of these twenty-seven cases have had surgery—three did not survive. As these writers have reviewed the symptoms, signs, etiology and diagnostic procedures in their paper, we shall not do so but will merely add our case to the growing number successfully treated by surgery.

REPORT OF CASE

A 17-month white female was sent to us by her family physician because of regurgitation of food. Her parents stated that she had never done well.

From the Departments of Pediatrics and Surgery, Holy Name of Jesus Hospital.

1. Clark, B. P., and Morgan, J. O.: Congenital Atresia of the Esophagus and Tracheo-Esophageal Fistula, South. M. J. 46: 748, 1953.

2. Ware, G. W., and Cross, L. L.: Congenital Tracheo-Esophageal Fistula without Atresia of the Esophagus, Pediatrics 14: 254, 1954.

She had "choking spells" immediately after birth. She had always been inclined to spit up her feedings. On many occasions after eating she would run her fingers down her throat or in some other way produce regurgitation of the food she had eaten. At these times she seemed to choke and cough severely during the process of regurgitation. About two months prior to this admission, she had pneumonia but otherwise had been relatively free from respiratory infections. She had never had abdominal distention. The family history was positive for tuberculosis and asthma (relationship unknown).

Physical examination at the time of admission was negative except for the obvious undernourished state and anemia. Hemogram showed 9 grams of hemoglobin, with 7,050 leucocytes. Urinalysis revealed 6 to 8 leucocytes per high power field. On the chest films there was some increase in the lung markings around the right hilum. The esophagus was examined with Lipiodol, thin and thick barium. There was no evidence of fistula or diverticulum. There was no delay in the barium passing into the stomach. It was noted that there was a small speck of opaque medium in the left main bronchus but it was felt that this had been aspirated as it was difficult to get her to swallow. Laryngoscopic examination was negative. The child was discharged on the sixth day unimproved.

Second admission: One month later she was readmitted. On the day preceding admission she

had been eating plums when she started vomiting everything and had continued to vomit to the time of admission. A plum seed was removed from the esophagus. She was given two small blood transfusions to correct her anemia and was discharged improved.

Third admission: Fifteen days later she was readmitted. It was stated that she had been unable to swallow even liquids for the previous two days. Her hemogram was entirely within normal limits. A gavage tube was passed, not without some difficulty, and she was gavage-fed for 24 hours. After removal of the tube she was again able to take strained food and liquids without difficulty.

Fourth admission: A little more than two months later (and four months after the first admission) she came in with the statement by her parents that she had been eating grapes and peaches earlier in the day and had started to have difficulty in swallowing. Almost immediately she developed a high fever. The child appeared pale. Otherwise, physical examination was unchanged. Fluoroscopic and x-ray examination of the esophagus with Lipiodol showed a markedly dilated esophagus above the level of the bifurcation of the trachea. None of the Lipiodol was seen to pass through the lower part of the esophagus. Portions of the contrast media were seen to pass into the trachea outlining the left main bronchus and to a slight extent the right one as well. Bronchoscopic examination was done and a fistula visualized just above the bifurcation of the trachea.

The child was prepared for surgery by several small transfusions, and a right posterior incision was made. The 3rd, 4th and 5th ribs were divided. The pleura was dissected away from the chest wall as far as the mid-portion of the bodies of the vertebrae. The trachea and esophagus were exposed and the fistula demonstrated. In an attempt to isolate it, it was pulled loose from the trachea leaving a definite defect in the tracheal wall. This defect was closed with arterial silk. The esophageal opening could not be found. A rubber tube drain was left at the site of the lesion and the chest closed.

Postoperative course was uneventful. She was kept in an atmosphere of mist for 48 hours and fluids given intravenously. After this period fluids by mouth were started and solids added rather rapidly. Since the operation she has had no difficulty in swallowing, no cough or respiratory infections, and is gaining rapidly.

Comments: Although this child presented a fairly classical picture of tracheo-esophageal fistula without atresia on the first admission, it took us more than four months to demonstrate its presence. In the meantime she had been worked up at our request by another clinic with negative findings. This should point up the difficulty of

making this diagnosis even when suspected. Careful and repeated x-ray and endoscopic examinations were required. Although we were not able to find the esophageal opening at surgery after the fistula had pulled loose from the trachea, the child made an uneventful recovery.

SUMMARY

We have presented a case of tracheo-esophageal fistula without atresia of the esophagus corrected by surgery.

Medical TV Camera Crew Tells Hardships Abroad— Gathering medical television film material in the remote areas of the world can be grueling. At least that's what the production team of the "March of Medicine" TV show found out in Nepal recently.

The group was in Nepal to film part of an hour-long show on the work of American doctors abroad. The program, produced by Smith, Kline and French Laboratories in cooperation with the American Medical Association, will be seen in color over the NBC television network next spring.

Three articles describing some of the trips taken to find American doctors working abroad appeared in the *Journal of the American Medical Association* (Aug. 17, 24, and 31).

In addition to Nepal, the areas visited by the production team included Korea, Hong Kong, Sarawak, Burma, India, Ethiopia, Lebanon, Turkey, and Guatemala.

Team members believe there is a good chance that Dr. Carl Friedericks, whom they filmed in Nepal, is the American doctor serving in the most remote and inaccessible region in the world.

It was while journeying to Dr. Friedericks in the mountain village of Tansen that some of the team played an aerial game of hide-and-seek, dodging mist-shrouded peaks while flying from Calcutta to Patna, a community in the lofty foothills of the Himalayas.

The mist obscured the mountain tops so completely that the plane had to make an emergency landing until things cleared "upstairs." Then they had to make an emergency take-off when rain started turning the airstrip into a mud puddle.

Later, the production team left the plane and proceeded by bus with four drivers—one to clear the road of stones and to test the bridges, another to run ahead to the nearest stream for water for the radiator, and the third to relieve the driver and to keep the motor lubricated with oil.

In Butwal, the party took to their feet. Accompanied by porters who carried the luggage, they started up the trail. Beautiful scenery was ignored as the weary travelers—all "city-born" and "desk-bred"—kept their eyes glued to the ground and to their feet, and held up black umbrellas to keep the sun off.

Finally, as the group headed toward the last steep incline, Dr. Friedericks appeared on horseback and easily persuaded one of the party to ride while the doctor walked alongside.

Dr. Friedericks reported that the major medical problem in his area, "as in most of Asia, consists of infectious diseases of all kinds."

"We have widespread cases of amebic dysentery," the doctor added, and "all kinds of tuberculosis. But I've had only one appendix case since I've been here!"

The camera crew spent four days in Tansen filming the doctor as he treated his hospital patients and visited a near-by school for annual examination of the children, finally following him out to a native village in the cholera area where he inoculated the population for protection.

Asian Flu Preparedness Explained by Experts—For the first time in history, the medical profession is “ahead of an impending epidemic of influenza,” Dr. Leroy E. Burney, surgeon general of the U. S. Public Health Service, said recently.

In fact, even before the first cases of Asian flu were reported, the profession was expecting a new strain of flu virus to appear, according to Keith E. Jensen, Ph. D., chief of the respiratory disease unit in the USPHS virus and rickettsia section at Montgomery, Ala. Their statements appeared in the August 31 Journal of the American Medical Association.

Dr. Jensen said, however, that while scientists were expecting a new type of flu virus, they could not develop a vaccine against it until it actually emerged and had been analyzed.

Careful study of past epidemics, which had made it possible to predict appearance of a new strain, also made it possible to develop vaccine quickly.

Dr. Jensen explained that four major types of virus (A, B, C, and D) are known to cause influenza. Each type is divided into several sets or families of strains. Type A—the one involved in the current epidemic—had produced three strains before 1957, including the one which apparently caused the 1918 pandemic.

Each strain had appeared and vanished, and this pattern had occurred often enough for investigators to expect it again. It appeared in May of 1957 when samples of what is now called Far East virus A were brought here from flu victims in Singapore.

The Far East virus is similar to the older strains but differs enough from all other types to require an entirely new vaccine. This has been made from viruses collected in early outbreaks of Asian flu.

Three different production methods have been worked out, and Army tests have shown the vaccine to be about 70 per cent effective, Dr. Burney noted.

He credited much of the profession's preparedness to the alertness of laboratory workers in the Far East who isolated the new virus, and to the world-wide influenza study program of the World Health Organization.

Dr. Burney said there is no doubt of the likelihood of an epidemic this winter, but at the moment there is no reason to expect it to be severe. The major danger is that—as probably happened in 1918—the virus may mutate, producing new strains different from the “parent” virus.

For this reason, even though the epidemic thus far has been “mild in terms of fatality,” it cannot be taken lightly.

“Illnesses usually are prostrating for two or more days and are often followed by a period of lassitude and weakness,” he said. “In an epidemic medical care facilities may be temporarily overtaxed, attendance in school interrupted, and the entire economy disrupted by absenteeism in all types of industries, some of which are in critical areas.”

The vaccine is “the only preventive tool at our command,” Dr. Burney said. Therefore, the USPHS, the A. M. A., and the Association of State and Territorial Health Officers are developing a plan for voluntary vaccination of as many persons as possible. The A. M. A. has asked its state and county societies to organize local programs to meet any possible outbreak. The A. M. A. program also is designed to relieve the strain on medical personnel which occurs “when so many people suddenly become ill.”

“Any such campaign,” Dr. Burney said, “must be conducted in an orderly fashion to avoid confusion and hysteria in the public and will call for the combined efforts of all of us.”

Inoculations Needed After Contact with Rabid Humans—While few actual cases of rabies contracted from other humans have been proved, it is possible for the disease to spread from one human to another, according to an expert on infectious diseases.

For that reason, any person who has been exposed to the saliva of a human suffering rabies should be inoculated against the disease, Dr. Karl F. Meyer, San Francisco, said.

Dr. Meyer, director emeritus of the Hooper Foundation, University of California Medical Center, discussed rabies in an editorial in the September 14 Journal of the American Medical Association. Dr. Meyer, who was once called “the Pacific Ocean of public health,” has studied a variety of other diseases, including brucellosis, botulism, East Coast fever, the encephalitides, plague, psittacosis, Q fever, and tularemia.

In the editorial Dr. Meyer said that the saliva of a rabid person contains the rabies virus. When the patient becomes disoriented and violent, his saliva may contaminate the skin and clothing of persons trying to treat or restrain him. If the attendant has an open sore or cut, the rabies virus could enter the skin.

Thus a physician is “duty-bound” to treat such exposed persons with antirabies vaccine, Dr. Meyer said. While many persons have been vaccinated even though they probably did not need the protection, the treatment was “in the best tradition of preventive medicine,” he said.

There have been only a few documented cases of man-to-man spread of rabies. This may be because all persons in intimate contact with a rabid person are treated with antirabies vaccine as soon as the diagnosis is proved by laboratory tests, Dr. Meyer said.

One report, published in 1940, said that of 8,591 persons in contact with human rabies infections, only one contracted the disease. While he was in Russia recently, Dr. Meyer said he heard of rabies being transmitted by homeless orphans who roamed the streets during the post-revolutionary period when medical and public health services were almost non-existent. However, few of these cases were investigated or proved.

Rabies is normally transmitted from infected dogs, cats, bats, and various wild animals. Early treatment with antirabies vaccine is necessary to prevent the development of the disease. Nothing can be done for a patient once he has the disease.

Thyroid Preparations Must Be Kept Fresh—Thyroid preparations must be “strictly fresh,” if they are to be effective in the treatment of underactive thyroid glands, a Wisconsin physician said a few days ago.

Thyroid preparations rapidly lose their potency and should not be allowed to stand unused for long. In fact, patients need a new supply of the drugs at least every three months, Dr. Arnold S. Jackson, Madison, said in the September 14 Journal of the American Medical Association. He is associated with the Frieda Meyer Nishan Foundation for the Study of Goiter of the Jackson Clinic.

The appearance of headache—a frequent symptom of hypothyroidism, but one seldom mentioned in textbooks—may give warning that a drug is losing its potency and needs replacing, Dr. Jackson said.

Hypothyroidism is “the most common chronic affliction” of persons living in the Midwestern “goiter belt,” Dr. Jackson said. Typical hypothyroid patients become tired and exhausted easily, chill readily, sleep with little effort during the day, are forgetful, and are often mentally and physically sluggish.



Editorials

CHEST DISEASES IN INSTITUTIONS

(Report of the American College of Chest Physicians' Committee on Chest Diseases in Institutions.)

Despite heartening evidence of increasing interest on the part of public officials and chest specialists, tuberculosis control in public institutions remains a problem vitally relating to the total tuberculosis control effort.

It cannot be too strongly emphasized that inadequate tuberculosis control measures in such institutions jeopardize the entire community. Contact between individuals in these institutions is generally close and sustained over long periods of time, multiplying opportunities for infection. Ultimately, a majority of the individuals return to the community, thus tending to make the effectiveness of controls in these institutions a valid measure of the community's total tuberculosis control program.

It is essential to develop public recognition and acceptance of this fact, and every method and means of so doing should be utilized. It appears that many of the impediments to effective controls in public institutions have their roots in public apathy, which can only be eliminated by development of informed public interest.

Several organizations are cooperating to achieve better tuberculosis control procedures in institutions.

The American College of Chest Physicians, through its committee, is taking an active part in this cooperative effort. Your committee has been of assistance in many ways; its members visiting institutions and hospitals throughout the United States and several foreign countries, making many contributions to improvement of tuberculosis control programs.

A number of cooperative studies have been completed or are under way. Publications cover the epidemiological and social, as well as medical and surgical aspects of chest diseases, offering significant additions to existing knowledge and assisting in its dissemination.

Improvements in control measures are being achieved despite the many impediments to prog-

ress. The value of x-raying all new admissions and of periodic rechecks is generally accepted. Several states perform chest surveys in their institutions every six months. Tuberculin skin testing of new admissions and retesting of negative reactors is standard procedure in a number of institutions. Preemployment examinations and periodic rechecks are obligatory in almost all public institutions, with more frequent x-ray film rechecks for personnel assigned to tuberculosis units.

The recently introduced chemotherapy in the treatment of psychiatric conditions is of great interest to chest specialists in mental hospitals and presents a tremendous challenge. The therapeutic approach to the mental and physical diseases in combination has brought about fundamental changes in neuropsychiatric-tuberculosis units. A number of states have intensified their programs and created better facilities for the medical and surgical treatment of tuberculosis, in some instances setting up thoracic surgical centers to meet the needs of several institutions. Occupational therapy and rehabilitation services are available in the majority of large institutions.

There still remain great gaps between existing knowledge and its beneficial application. A general program of prevention should be instituted. All factors which may decrease individual resistance and/or increase the hazards of spreading tuberculosis should be emphasized and combative measures detailed.

Adequate housing and proper food for institutional residents should be made available. All possible effort should be made to develop and maintain proper hygienic habit patterns or alternative controls. Recreational facilities and outdoor activities should be provided.

Periodic chest surveys in all institutions should be a major objective, and all persons with inactive tuberculosis should be rechecked periodically by x-ray film and laboratory tests.

Your committee has reviewed the value of tuberculin skin testing in institutions and believes that new admissions should be given this test, with negative reactors being retested at least once a year. Information accruing to this procedure

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would provide important diagnostic help in individual cases and serve as a valuable index to the efficiency of the tuberculosis control program.

Overcrowding in public institutions, a regrettable tradition, may be partially combatted by more efficient utilization of existing facilities and fullest possible application of the latest medical programs. In its overall aspects, however, this remains a problem susceptible to full solution only by construction of new facilities or presently unforeseen medical discoveries.

We also discussed the problems of adequate statistical information concerning tuberculosis control in institutions and emphasized the need for more reliable data in this connection. A special effort will be made to obtain the cooperation of agencies interested in this field.

After a reviewal of all pertinent factors, your committee has formulated the following minimum requirements for tuberculosis control programs in penal and mental institutions:

1. The program shall be under the direction of an experienced chest specialist who shall supervise the case finding as well as the clinical work.
2. The program shall incorporate complete case finding procedures, including x-raying of all new admissions, preemployment examinations and periodic institutional surveys, at least annually.
3. Every new admission shall have a tuberculin skin test and negative reactors shall be retested at least annually.
4. Proper clinical and laboratory facilities for diagnosis of chest conditions shall be available.
5. There shall be adequate provisions or arrangements for medical and surgical treatment of tuberculosis.
6. Periodic, frequent follow-up of all inactive cases of tuberculosis in the institution.

Your committee happily notes the trend in mental hospitals toward centralization of care and treatment for active and apparently active tuberculous patients. This should result in improvement in treatment as well as in the institutional tuberculosis control programs. Progress in this area is already reflected in lower institutional tuberculosis incidence and a marked decrease of tuberculosis mortality.

Gains already made, however, only emphasize what can and must be done. Even though tuberculosis control programs in local communities have been intensified, new admissions to neuropsychiatric-tuberculosis units remain relatively high and the tuberculosis problem in public institutions continues to be vital. The vast majority of mental patients afflicted with tuberculosis are cared for in public institutions, i.e., state mental hospitals, veterans' hospitals and psychiatric units of penal institutions. A crusade for improving the conditions in these institutions should be directed at the public and the officials entrusted with institutional administration.

SOUTHERN MEDICAL ASSOCIATION HOLDS GROUND-BREAKING CEREMONY IN BIRMINGHAM

The first step in the construction of the Association's \$225,000 headquarters office building took place in Birmingham recently, when the traditional ground-breaking ceremony was held at the building site. Located on a nearly one acre plot at Highland Avenue and Niazuma on the Southside, the modern structure will symbolize the beginning of the second half-century of the Association's progress.

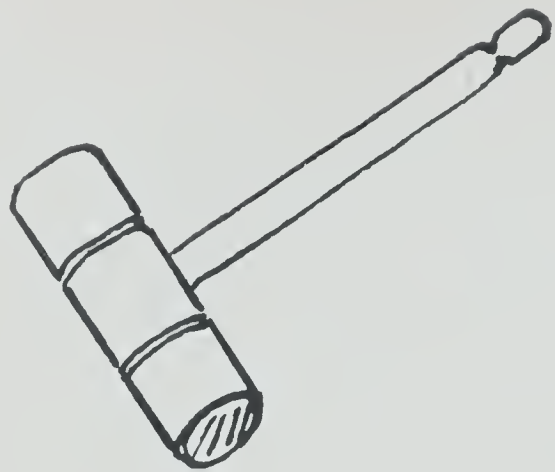
The program, presided over by Dr. J. P. Culpepper, Jr., Hattiesburg, Mississippi, President, included addresses by Dr. Robert C. Berson, Dean, Medical College of Alabama; Dr. R. L. Sanders, Trustee, Memphis, Tennessee; Dr. Lee F. Turlington, Chairman of the Home Building Committee, Birmingham; Dr. A. Clayton McCarty, Chairman of the Council, Louisville, Kentucky, and Mr. C. P. Loran, Advisor and Professional Relations Counselor and Secretary of the Home Building Finance Committee of the Association. Greetings from the Woman's Auxiliary were extended by Mrs. John M. Chenault, Decatur, Alabama, Councilor from Alabama and Mrs. Walker L. Curtis, Atlanta, President-elect of the Auxiliary. The invocation was delivered by Dr. John H. Buchanan, former distinguished pastor of Southside Baptist Church, Birmingham.

More than 100 distinguished physicians from all over the South, along with state and local officials and civic leaders, attended the ceremony.

Scores of telegrams of congratulations and good wishes were received from national, state and regional societies and from distinguished members and friends of the Association throughout the nation, including the President of the United States.

The building, to be constructed from glass, marble, brick and stainless steel, will be one of the most modern and completely functional buildings in the South. When completed, it will house the Association's entire operation, including the executive offices, the editorial and business offices of the *Southern Medical Journal*, the Association's official publication, the offices of the Woman's Auxiliary, and will provide reserve facilities for the future growth of the Association. The cost of the building is being partly financed by contributions from members and friends of the Association.

The offices of the Association have been situated in leased property in downtown Birmingham and at the present address since 1915. Since 1906, the birthdate of the Association, the organization has grown from a few members to nearly 10,000, and the finest in medicine has been closely identified with its establishment and growth.



President's Page

A short time ago, one of my good friends and patients who teaches in the local high school was in my office. I told her that I thought she held one of the most enviable positions of all the people I know. In a very short time, the only remaining single child of mine will be married; and with her marriage our contact with growing, developing, exuberant youth will be interrupted after many years of plans, hopes, frustrations and accomplishments of receiving a family and seeing them through school to a successful marriage. My teacher friend, on the other hand, will always be in the midst of youth and its problems. For every generation which moves out into the world, a new generation steps forward to begin. The esteem and admiration the teacher receives from each new group will equal that held by those who move on. Thus her life of service will be unmatched by anyone in her community, and the monetary rewards will take on diminishing significance as the years go by.

Speaking of this impression to another teacher who has achieved his gray hairs in the field of teaching, he mentioned that the rewards of esteem and respect he received for each group through every passing year took on more importance in his life. This seems borne out by what I saw one year ago during commencement, when my daughter graduated at one of the older schools in Virginia. I watched carefully the older faculty members and was impressed by their youthful enthusiasm of the occasion and the great love and affection showered on them by the new grads as well as those who finished many years before.

The role of the physician in a community touches many facets of human interest. Recently a great surgeon mentioned in one of our medi-

cal publications that it might be unwise to have a great deal of money at retirement, as the responsibility of wealth in itself might destroy both leisure and health. I have had the opportunity of closely observing five physicians who had the good fortunes to serve their communities long and well. I do not get the impression that they have achieved the peace of mind or the contentment of position shown by the faculty members mentioned above.

I believe the greatest pleasure I have received in being a member of the Medical Association of the State of Alabama is knowing so many of its fine members. Most of those I know so well, I have met in committee or other work of the Association. Our periods of collective interest and action are short lived and I have never had an opportunity to hear anyone state his goal in practice.

There is an idealism publicly accepted which applies to those who serve, whether in medicine, teaching or the ministry. I do not have the capacity; but I would love to see some physician put in writing the goal, ambitions and rewards we in this hurried world are trying to accomplish in medicine today.



ORGANIZATION SECTION

PROGRAM OF THE ASSOCIATION

This is the second in a series which outlines the program of the Association as it was developed at the planning meeting, August 3 and 4.

BUREAU OF MEDICAL SERVICE

Dr. J. W. Simpson, Advisory Committee member, sat with the following committee representatives during the work session of the two-day meeting: Drs. Hughes Kennedy, Jr., Chairman, Committee on Maternal & Child Health; Dr. James French, representing the Maternal portion of the same committee; Dr. H. E. Simon, representing the Committee on Medical Care for Industrial Workers; Dr. W. N. Jones, Chairman, Committee on Cancer Control; Dr. Paul Nickerson, Chairman, Committee on Rural Health; Dr. J. Mac Barnes, Chairman, Committee on Emergency Medical Service; Dr. J. Paul Jones, Chairman, Committee on Indigent Care; Dr. Jack Jarvis, Chairman, Committee on Mental Hygiene. Dr. R. K. Oliver, Chairman, Committee on Tuberculosis and Chronic Pulmonary Diseases, and his committee members found it impossible to attend the meeting; but a comprehensive written report was submitted for consideration by the group.

Following are the reports of the committees as presented to the assembly on Sunday morning by Dr. Simpson:

Committee on Maternal and Child Health—Dr. Hughes Kennedy, Jr., Chairman.

“The following is proposed for study and development:

“It is recommended that a seminar or panel discussion be arranged jointly with pediatricians and obstetricians to be presented for general practitioners as well as obstetricians and pediatricians.

“It is recommended that premature centers be established in strategic locations; certainly in Mobile, Montgomery and Birmingham. The one at Tuskegee is doing a good job and such centers should be established in other locations.

“It is recommended that hospitals be required to do an Rh on all mothers at delivery. Of course this should have been done at an earlier time at prenatal examinations. If no record can be found, it should be done at the time of delivery.

“It is recommended that the Department of Health furnish the intermediate strength of PPD for intradermal tuberculin tests. The number one strength of PPD is too weak for routine use, although it is admitted that it should be used where there is a strong suspicion of tuberculosis. In routine testing it is impractical to do the first strength and then follow it up with the second. The number two strength is too strong for routine testing. (Note: Dr. D. G. Gill was present when this report was read on Sunday morning. He approved Dr. Kennedy's recommendation concerning PPD and stated that it would be provided.)

“It is recommended that measures be taken to care for the medically indigent chronically ill and handicapped children.

“The establishment of poison control centers is recommended.

“The establishment of a Committee for Youth Study is recommended. It is preferred to call the committee Youth Study rather than Juvenile Delinquency.”

Maternal Section—Dr. James H. French, reporting.

“The members of the Maternal portion of the committee desire to submit the following proposal as to committee work for the coming year.

“It is proposed to continue the work of previous committees in obtaining a complete summary of maternal deaths in Alabama for the year. For the past two years these have been divided into categories and discussed at luncheon roundtables at the annual meeting of the Alabama Association of Obstetricians and Gynecologists where they have been favorably received. The Association voted at the last meeting to continue this each year if possible, and the president of the Association has already requested that this be included in the program for the meeting of 1958.

“The above program will require a great deal of investigative work and is the only specific program planned. However, suggestions from the committee chairman or the Advisory Committee will be welcome.”

Committee on Medical Care for Industrial Workers—Dr. H. E. Simon reporting for Dr. E. Bryce Robinson, Jr., Chairman.

Dr. Simon stated that past experience had developed the fact that conferences with such medical care programs as have already been established have not resulted in the development of real liaison relationships. Recently these have been attempted in accordance with the principles of guidance promulgated by the American Medical Association. Acceptance of these principles has been indicated only by representatives of organized medicine. It is therefore felt that further attempts at so-called liaison procedures probably will be fruitless under the present setup.

It is felt that the important work of this committee in the future should be an effort to develop principles of guidance for industrial medical care and a concerted effort by the individual doctors engaged in this practice to obtain acceptance of the principles.

Committee on Cancer Control—Dr. W. N. Jones, Chairman.

"The State Cancer Control Committee has for its immediate objective establishing and promoting a state central tumor registry. Last April such a recommendation was made in its annual report to the State Medical Association. This report was approved by the State Board of Censors and adopted by the Association.

"The need for such a central state registry is great. The purpose is to cooperate with the Hospital Tumor Registry now being supported and promoted by the American College of Surgeons, to accumulate scientific data not only of diagnoses but also therapy methods, results, and follow-up of patients; and to serve as a central clearing station not only for the Hospital Tumor Registry patients but for the patients of all the physicians who would like to cooperate in accumulating these data.

"The Cancer Control Committee expects to gain the support of the groups now supporting the present Pathology Registry and many other professional groups as well. The Pathology Registry is to be incorporated in this state central tumor registry. To enumerate some of the supporting groups, these are: the State Medical Association; Cancer Control Division, State Health Department; Alabama Association of Pathology; Alabama Division, American Cancer Society; Alabama Division, American College of Surgeons; State Obstetrical, Gynecological, Radiological, Dermatological and other Societies; Alabama Hospital Association; and the Alabama Academy of General Practice.

"The Cancer Control Committee wishes to have

a governing board or board of trustees, with a member appointed or elected from each of the supporting groups to serve as this governing board. The governing board would appoint or elect a smaller executive board who would select a chairman, a director of this tumor registry, an executive secretary, and a clerical aide. They would choose equipment and site, and cooperate with the Cancer Control Division of the State Health Department in operating such a state central registry.

"The Cancer Control Committee has been advised that the American Cancer Society will give technical and advisory aid in establishing such a central registry when requested through the Alabama Division of the American Cancer Society. Your State Cancer Committee has been lead to believe that funds necessary for such a registry can be obtained by grant from the Alabama Division of the American Cancer Society and/or the National Institutes of Health upon proper application after organization.

"In addition to the project of establishing this state central registry, the Cancer Control Committee will continue to work with the State Board of Health, Cancer Control Division, in every way to promote and expand our present cancer program."

Committee on Rural Health—Dr. Paul Nickerson, Chairman.

"This committee is an outgrowth of a liaison subcommittee of the Committee on Medical Service and Public Relations as it existed originally and before being broken into parts by Association action.

"The committee has recently met with key people of Alabama Polytechnic Institute's Extension Service and has formed what might be called a medical rural-health council, which will function with the Association's committee in planning of programs where applicable.

"Education is the major phase of a positive program which is the aim of this committee's efforts at present. An example of this effort is the polio immunization program. The committee feels that this should be one of the first projects which could be made operative through individual county units appointed by the council."

Committee on Emergency Medical Service—Dr. J. Mac Barnes, Chairman.

"Since this is a new committee, there is no unfinished business and no left over material from prior years. The function of this committee must now be:

A. Plan for a program of emergency medical care.

B. Press for adoption of the program by the Association.

C. Carry out the planned program to the fullest extent so that this Association may meet any situation calling for emergency medical care in an adequate manner.

"Planning for emergency medical care on a state-wide basis may well be separated into three divisions, namely:

- I. Local hospital emergency planning.
- II. Large scale emergency planning.
- III. Total disaster planning.

"In the division of local planning it would be important that the state committee have a survey of existing hospital facilities with particular reference to emergency bed capacity and to available supplies on hand. Considerable work has been done toward this end by other agencies within the state and collaboration with them to whatever extent may be feasible is recommended, rather than complete duplication of their efforts. It is essential that each hospital staff organize itself for emergency, or disaster, situations and it is equally important that each County Medical Society also perfect its own internal organization for disaster. When such local plans have been completed and the necessary information is in the hands of this committee, the next division of planning could readily be accomplished.

"It is difficult to imagine any natural disaster severe enough to encompass the entire state, but a series of entirely unrelated natural disasters could well involve large segments of the state, or the entire state. It is possible for a local disaster to assume greater dimensions than can be cared for locally, and it is equally possible for existing medical facilities in any locality to be destroyed by that same disaster. In either case, support and cooperation must be forthcoming from nearby counties, and it would be the function of the ultimate Regional Disaster Chief to determine whence that support would come. This idea suggests at once the need for a firm state-wide program headed by a disaster chief authorized by this Association to call this program into action. Please note that the word 'disaster' is used freely, rather than the more formal 'Emergency Medical Care.' It is further suggested that there be regional chiefs in charge of whatever regions, or districts, the Association may see fit to divide this state into. Some such program as this could provide a well integrated but still flexible plan for providing adequate medical aid to any part of the state that might require assistance. At the same time, this type organization would provide the framework for administering aid either in a state-wide disaster or in a series of local disasters with state-wide impact.

"Whatever plans may be made in these first two divisions will be basic to any planning for a total

disaster which we now visualize only as an atomic disaster. Sound local planning and a sound state-wide program would provide this Association with an effectively organized unit ready for integration into the plans of the American Red Cross and those of the federal and state civil defense authorities. The total implications of atomic disaster are so horrible as to shock the imagination and, since we have no previous experience in this field, the committee contends that sound planning from the local level upward would be the best approach to the ultimate atomic disaster.

"The task confronting this committee is monumental but not impossible. Perhaps the committee is influenced by experience during the past few years in disaster planning for Montgomery County, but it is believed that the total task will take two to three years for final accomplishment. The State Medical Association must first adopt this program in such a manner that each local medical society feels an interest in the program and becomes willing to cooperate both in local planning and in state-wide planning. With such cooperation from all the counties, it is believed that the first two divisions of the problem can be accomplished in one year, leaving total or atomic planning for a second year's project.

"If this group meeting reports favorably on this preliminary report, then the committee will proceed to prepare its report and recommendation to the Association for its next meeting." (Note: The group voted favorably on the report on August 4.)
Committee on Indigent Care—Dr. J. Paul Jones, Chairman.

Dr. Jones, in reporting on the work of this committee, called attention to a report to the Legislature of the state of Alabama by the Legislative Interim Committee on Indigent Medical Care. The Association's Committee on Indigent Care appeared before the Legislative Interim Committee in support of legislation to provide indigent care from the standpoint of hospitalization only. The next immediate action of this committee hinges upon whether or not the State Legislature passes the bill now before it. There are certain to be many problems arising if this act becomes effective.

Committee on Mental Hygiene—Dr. Jack Jarvis, Chairman.

"The committee will provide two types of services:

- A. An active participation in the development of psychiatric and mental health facilities.
- B. Advisory recommendations regarding psychiatric and mental health problems.

"The committee will be actively concerned with:

1. The development of the Department of Psychiatry of the Medical College of Alabama.
2. The development of VA psychiatric services.
3. Strengthening the State Hospital system.
4. The growth of psychiatric in-patient and out-patient facilities in Montgomery and Mobile.

This work will be carried on largely on an individual basis with collaboration, as possible, with other members of the committee and other mental health personnel.

"The committee as a unit will be concerned with:

1. The cooperation of insurance companies and other such services, particularly the Blue Cross and Medicare program, in providing some benefit for mental illness.
2. The relationship between the profession of clinical psychology and the medical profession.
3. The development of treatment facilities for the alcoholic.
4. Assisting with the Mental Health Fund Drive.
5. Assisting with the establishment of new mental health clinics and strengthening of those that have been established.
6. Cooperation with the Mental Hygiene Committee of the Auxiliary."

Committee on Tuberculosis and Chronic Pulmonary Diseases—Dr. Robert K. Oliver, Chairman.

"With respect to tuberculosis the committee notes the continuing relatively high incidence of newly reported cases of tuberculosis of active character. The incidence of new cases is not declining in keeping with the decline in the death rate. This has resulted in the accumulation in the community of increasing numbers of active or potentially active cases of tuberculosis either in actual need of hospitalization for treatment or prospective candidates for either retreatment or original treatment in the future.

"The committee continues to regard with considerable alarm the increasing incidence of apparently new cases of tuberculosis infected for what are for all practical purposes drug-resistant strains of organisms. These patients do not respond to chemotherapy or to other measures of therapy with the rapidity or the completeness of healing that was so commonly seen during the first five or six years of the present decade. There has been a distinct worsening in the response to treatment noted among these patients during the last two to three years. This is thought to result solely from the problem of drug-resistant strains of organisms

and consequent loss of therapeutic efficiency with the major chemotherapeutic agents now available. This problem has been compounded by ill-advised administration of chemotherapy under private supervision and without proper use of the adjunctive means of therapy, particularly surgical treatment, pneumotherapy, isolation, and bed rest. The committee anticipates that unless there is introduced into the treatment of tuberculosis one or more new agents of first class character that a continued worsening of patient response to chemotherapy can be anticipated and that out-patient chemotherapy will become an increasingly disappointing procedure. This is a trend that is already well established, has been noted in this state and elsewhere, and is entirely logical in its development.

"Anticipating increasing rather than declining demand for beds for the treatment of tuberculosis, the committee advises that all efforts be made to further the construction of currently proposed facilities for the treatment of tuberculosis. These include an addition to the Jefferson Sanatorium, the construction of a new sanatorium at Tuscaloosa which is now well under way, and the construction of an addition to the Montgomery Tuberculosis Sanatorium which depends in turn upon completion of plans for issuance of bonds for the purpose of hospital construction by the state of Alabama. The need that now exists and the future need that is anticipated impel this committee to urge that the State Medical Association use its influence to secure the completion of all of these additions to the treatment facilities now available in this state and that the Association further be prepared to foster the construction of additional facilities at a future date if the desirability of same should become apparent to the State Board of Health.

"With reference to chronic pulmonary diseases of non-tuberculous etiology the committee would wish to point out to the Association the very large incidence of bronchiectasis, so-called coin lesions, and malignancies involving the pulmonary structure. These common diseases are frequently encountered in the community and demand a high degree of diagnostic and therapeutic ability on the part of those private practitioners and specialists called upon to amass clinical information and direct therapy. In particular, the importance of the so-called coin lesion should be emphasized to the members of the Association since more than eighty per cent of these lesions have, in large series of well studied cases, proven to be of importance clinically when excised and examined histologically. Most of them constitute tuberculomas, inspissated tuberculous cavities, or neoplasms. The excision of these lesions should be given careful consideration when they are encountered in

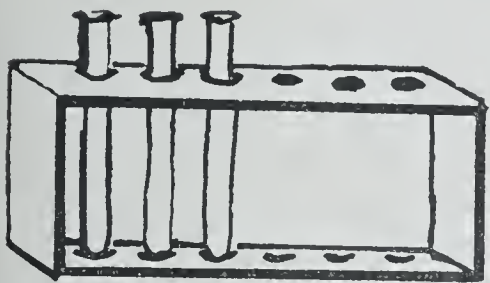
the course of x-ray studies and the considerations involved should be quite apparent on the basis of the above comments.

"In the industrial centers of the state which are growing in economic and social importance the incidence of pneumoconiosis, either with or without complicating tuberculosis, is a problem of great importance and deserves the continued interest of the Medical Association of the State of Alabama. The inclusion of a program of preventive and

diagnostic measures in the functions of the State Health Department should be given careful consideration by the Board of Censors."

* * *

These reports constitute an outline of the aims and the plan of action of the second bureau of the Association. The remainder of the Association's program will appear in the November issue of the *Journal*.



STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.

State Health Officer

A SAFE EFFECTIVE WAY TO PREVENTION OF DENTAL DECAY

Science, as well as the individual, sometimes begins a journey along one trail only to wind up taking a more profitable turn down another at a not-too-distant crossroads. Just such a turn was taken not many years ago in one area of medical studies, and the end result was the development of one of the major public health measures of our time. The application of this measure has potential for benefiting not only persons who are living now but future generations as well. As a matter of fact, many millions of Americans are already reaping the health gains this measure can bring. It is estimated that more than 22.8 million people in a total of 1,142 communities in the nation have put this measure into practice in their areas. Five of these communities were, and are, in Alabama.

The fairly recent health measure with great potential is the fluoridation of public water supplies. Beyond any doubt now is the fact that it can prevent to a considerable degree the number of cavities or caries which might otherwise have developed in an individual's teeth.

Fluoridated water is not, nor does any responsible person or agency claim it to be, a panacea, a cure-all for dental cavities. The presence of a minute quantity of artificially added fluoride in the water which pours from the faucet in your home does not mean that you can immediately stop brushing your teeth, or that you need never again pay a visit to your dentist. Rather, fluoridation of water supplies is another step, although

a major one, in the direction of even better dental health.

Fluoridation of water supplies is helpless against the dental cavities which perhaps started forming several years ago. But it is far from powerless in the future, for the "long run." Fluoridation appears to be especially helpful for young children whose teeth have not yet calcified or hardened. When boys and girls whose teeth are still in the formative stage can drink fluoridated water, the most recent studies have shown that cavities can be reduced by as much as 60 per cent!

Thus, it does not take a great stretch of the imagination to envision widespread prevention of many dental cavities in the future. A fluoridated water supply today means a lessening of cavities among the persons who will be adults in a few short years. Then, as more and more individuals benefit, the time will come when all individuals in a community have received this measure's protection.

By adopting the artificial fluoridation of public water supplies, man in reality is giving his "modified" approval to an occurrence in nature. We mentioned earlier that some 22.8 million people were drinking fluoridated water, and that many of them are benefiting now from it. This number includes the people in communities where operators of public water supplies have been instructed to add minute quantities of fluoride to the water. However, many other persons, perhaps numbering also in the millions, have been benefiting from fluoridated water for many, many years. But no one had to add the fluoride in these other places: it was already there, naturally, and the benefactors long did not realize the reason for their teeth's being better—stronger and with fewer cavities—than those of their friends who grew up in other towns.

In fact, nature, when left to its own devices, sometimes tends to be overly generous with fluoride. The amount of this substance which is recommended for artificial fluoridation is one part fluoride per one million parts of water. A spokesman for the American Dental Association gives this explanation of just how much fluoride this amounts to: "... To get an idea of just how small a proportion one part per million is, imagine a bathtub about one-third full of water. One drop added to that amount would be about one part per million."

Naturally fluoridated water, however, often contains several times this amount of fluoride. And often, too, this excess amount causes an individual's teeth to become mottled or stained over a period of years. But studies to date show clearly that one part of fluoride per million parts of water will not mottle the teeth.

While mottled teeth are undesirable, it was this very condition that started dentists and other scientists eventually on the road to the development of fluoridation as a public health measure. This condition, in its early, mild stages, was no particular problem. As a matter of fact, it was and is hardly noticeable. However, mottling in the moderate and severe stages presented two problems. First was the individual's appearance or "looks," while the second and basically more important dilemma was the matter of defective tooth structure brought on or caused by the mottling.

Little by little, the evidence mounted. The discovery was made that mottled teeth cropped up in certain areas only. Then examinations of water samples and other studies slowly drew a cause-and-effect relationship between fluoride and the damaged teeth. The year 1931 is the date when fluoride was finally indicted as the "culprit."

Then in the years that followed, the scientists branched out in their studies and soon they came up with the theory of fluoride as an agent for the prevention of cavities. They were able to do so because, all along the way, they had observed that not only do mottled teeth and an excess of natural fluoride go hand in hand but strong teeth with fewer cavities and fluoride also go together.

How does such a small amount of this substance work to combat decay over a period of time? At least three theories have been advanced to explain the preventive action involved. One is that fluoride lowers the solubility of tooth structure, part of which is the enamel. Another belief is the chemical inhibits or slows down the bacterial processes that are believed to dissolve the protein and calcified substances of the teeth. And still a third theory is that fluoride changes the bacterial life ever-present in the mouth, and thereby reduces the number of bacteria that are associated with the decaying process.

When fluoridation of public water supplies was first proposed as a mass means of preventive dental health, some questions were raised about the advisability of the practice for various reasons.

Many of the questions came from sincere scientists and other individuals with honest differences of opinion. Among the queries were how much if any fluoride would remain in the body of the water user, and what effects might such an accumulation have? Such cumulative effects might have undesirable results in victims of some of the chronic diseases, it was thought.

Once such questions were legitimately asked, and as long as reasonable doubts remained, science was more or less bound to try to find answers. And answer them the scientists did, to the satisfaction of many if not all the original questioners. In studies too numerous to mention here, fluoride has been found to do its beneficial work for the teeth, and then to leave the body as waste material, for the most part. Experiments conducted over long periods of time have failed to turn up any significant changes in growth and development resulting from fluoridation.

In short, fluoridation has proved itself many times over as a public health measure worthy of the support of individuals, communities and the nation. The overwhelming evidence in support of this measure is why the Alabama State Department of Health not only approves but advocates the fluoridation of public water supplies in this state. In doing so, the Department joins a whole host of other health departments, medical and dental societies and other health and medical groups which have been and remain in the forefront of preventive American medicine. The list is long, and all the names cannot be mentioned here. But among them are the American Medical Association, the American Dental Association and the National Research Council.

The idea of adding substances to water supplies is not new. The fact that another chemical by the name of chlorine is regularly a part of the water we drink is familiar to most if not all people. The processes for adding the chemicals are also similar. But the reasons for adding the two differ in one important respect. Chlorine is a chemical added to remove the possible causes of disease. Fluoride, on the other hand, is used to process a safe water to prevent a certain disease—cavities in the teeth.

Two things about fluoridation, its proven effectiveness and its safety, would perhaps be enough to "sell" its use to most people. But there is still another item in its favor. It is relatively inexpensive. Here are some actual examples of fluoridation's cost: \$3,000 a year for the 20,000 population of the New York community by the name of New-

burgh. This amounts roughly to a little more than 10 cents per person per year. After the initial expense of equipment, fluoridated water costs one Minnesota town called Red Lakes Falls about five cents per person in a year's time. Thus, as one Minnesota health official put it: "For an annual investment per person of the price of one candy bar or a little more, the community can bring greatly improved dental health to its younger children. . . ."

Fluoridation's approval by the Alabama State Department of Health came only after the measure had been shown to be both safe and effective. In the past, the measures which have been adopted on the Department's recommendation succeeded in helping Alabamians to attain their present high level of health and well-being. And the Department sees fluoridation as still another step in this same direction, or an even higher level of public health for the state's residents.

The State Department of Health followed its approval with the development of a policy and a set of standards to govern the addition of fluoride to public water supplies. The policy clearly states that, while fluoridation is not a requirement for a safe water supply, it is permitted.

But before an Alabama community can add this substance to its drinking water, certain conditions must be met. First, the people living in the community must decide that they want fluoridation. The people's wishes in this regard may be reflected in an ordinance passed by the community's governing body, or the issue may be put to a vote in a referendum. In addition, two groups in the county or district of which the community is a part must also approve the process. These are the county medical society and the district dental society. And it is not enough for the people and these groups to approve fluoridation: they must send copies of ordinances and resolutions to the State Department of Health as proof of their intentions. Moreover, in the event the water supply is privately owned, the owner also must submit a resolution of approval to the Department.

The Department has written into its standards on fluoridation still other safeguards. First, the community's water plant must satisfy certain physical and personnel qualifications. Moreover, the plant's equipment must have a record of and be maintained for dependable, efficient and accurate service. As for the amount of fluoride in the finished water, no more than one part fluoride per million parts of water is allowed in the winter, while during the summer, when more water is usually drunk, the maximum amount of fluoride allowed is 0.7 part per million parts of water.

To see that its standards are carried out, the Department requires that laboratory control tests be made on fluoridated water supplies at least

daily. The plant operator must fill out and send to the Department a monthly report, including such information as the amount of fluoride added and the amount of water treated each day.

Although the Alabama Department of Health approved fluoridation in 1952, only five communities in the state have taken steps to avail themselves of this health protection. These five are Tuscaloosa, Sheffield, Livingston, Fayette and Albertville. But even this total shows progress.

The decision to fluoridate a community water supply rests, as we have indicated, with the people in that community. And undoubtedly, more and more such decisions will come when these same people know that fluoridation is these three things: it is effective, it is safe, and it is relatively inexpensive.

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director
SPECIMENS EXAMINED

June 1957

Examinations for diphtheria bacilli and Vincent's	55
Agglutination tests	743
Typhoid cultures (blood, feces and urine)	639
Brucella cultures	6
Examinations for malaria	85
Examinations for intestinal parasites	2,762
Darkfield examinations	13
Serologic tests for syphilis (blood and spinal fluid)	23,042
Examinations for gonococci	1,499
Examinations for tubercle bacilli	3,417
Examinations for Negri bodies (smears & animal inoculations)	231
Water examinations	2,596
Milk and dairy products examinations	4,774
Miscellaneous examinations	854

Total 40,716

BUREAU OF PREVENTABLE DISEASES

W. H. Y. SMITH, M. D., Director
CURRENT MORBIDITY STATISTICS

1957

	May	June	E. E.* June
Typhoid and paratyphoid	3	1	6
Undulant fever	0	2	2
Meningitis	19	13	9
Scarlet fever	536	418	22
Whooping cough	23	34	162
Diphtheria	3	4	7
Tetanus	3	3	3
Tuberculosis	187	227	217
Tularemia	1	0	0
Amebic dysentery	1	1	2
Malaria	0	0	2
Influenza	214	96	68
Smallpox	0	0	0
Measles	1768	1342	428
Poliomyelitis	2	5	24
Encephalitis	0	6	0
Chickenpox	103	46	77
Typhus fever	2	3	2
Mumps	118	68	159
Cancer	824	808	382
Pellagra	0	0	2
Pneumonia	167	171	131
Syphilis	219	136	442
Chancroid	8	5	9
Gonorrhea	368	295	389
Rabies—Human cases	0	0	0
Positive animal heads	22	19	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATISTICS
AND COMPARATIVE RATES, APRIL 1957

Live Births, Deaths, Fetal Deaths, Infant Deaths, and Deaths by Cause	Number Registered During April 1957			Rates* (Annual Basis)		
	Total	White	Non- White	1957	1956	1955
Live births	6209	3852	2357	22.8	24.0	21.6
Deaths	2313	1449	864	8.5	8.3	7.7
Fetal deaths	143	64	79	22.5	21.9	23.1
Infant deaths—						
under one month	141	73	68	22.7	19.9	21.9
under one year	193	90	103	31.1	30.8	31.0
Cause of Death						
Tuberculosis, 001-019	31	15	16	11.4	12.0	12.8
Syphilis, 020, 029	4		4	1.5		3.8
Dysentery, 045-048						0.8
Diphtheria, 055	1	1		0.4		0.4
Whooping cough, 056	1		1	0.4	0.4	1.1
Meningococcal infections, 057					0.4	0.4
Poliomyelitis, 080, 081	1	1		0.4	0.4	
Measles, 085	4	3	1	1.5		
Malignant neoplasms, 140-205	289	212	77	106.3	112.3	104.0
Diabetes mellitus, 260	29	18	11	10.7	10.5	7.9
Pellagra, 281	1	1		0.4	0.7	0.4
Vascular lesions of central nervous system, 330-334	319	212	107	117.3	107.4	102.5
Rheumatic fever, 400-402	2		2	0.7	1.1	1.5
Diseases of the heart, 410-443	785	517	268	288.7	263.2	251.2
Hypertension with heart disease, 440-443	155	71	84	57.0	54.8	54.1
Diseases of the arteries, 450-456	52	27	25	19.1	15.8	18.4
Influenza, 480-483	16	10	6	5.9	6.4	6.4
Pneumonia, all forms, 490-493	59	28	31	21.7	27.0	19.9
Bronchitis, 500-502	3	1	2	1.1	4.1	0.4
Appendicitis, 550-553	6	3	3	2.2	1.9	0.8
Intestinal obstruction and hernia, 560, 561, 570	9	4	5	3.3	2.2	3.8
Gastro-enteritis and colitis, under 2, 571.0, 764	6	2	4	2.2	3.0	0.8
Cirrhosis of liver, 581	8	5	3	2.9	4.9	3.4
Diseases of pregnancy and childbirth, 640-689	4	2	2	6.3	9.2	6.8
Congenital malformations, 750-759	31	23	8	5.0	3.8	4.9
Accidents, total, 800-962	166	107	59	61.0	64.6	51.4
Motor vehicle accidents, 810-835, 960	82	58	24	30.2	31.5	20.7
All other defined causes	415	231	184	152.6	145.3	133.7
Ill-defined and unknown causes, 780-793, 795	71	26	45	26.1	34.5	28.9

PROVISIONAL BIRTH AND DEATH STATISTICS
AND COMPARATIVE DATA FOR MAY 1957

Live Births, Deaths, Fetal Deaths, Infant Deaths, and Deaths by Cause	Number Registered During May 1957			Rates* (Annual Basis)		
	Total	White	Non- White	1957	1956	1955
Live births	6129	3840	2289	21.8	21.7	21.0
Deaths	2246	1405	841	8.0	8.3	8.0
Fetal deaths	127	61	66	20.3	20.8	28.5
Infant deaths—						
under one month	147	85	62	24.0	22.8	22.8
under one year	208	106	102	33.9	33.3	33.0
Cause of Death						
Tuberculosis, 001-019	26	11	15	9.2	13.3	14.9
Syphilis, 020, 029	5		5	1.8	2.5	3.6
Dysentery, 045-048					0.7	
Diphtheria, 055						
Whooping cough, 056					0.4	1.1
Meningococcal infections, 057	3	2	1	1.1	0.4	1.8
Poliomyelitis, 080, 081	1	1		0.4		1.4
Measles, 085	4	2	2	1.4	1.4	0.4
Malignant neoplasms, 140-205	278	206	72	98.7	112.9	105.0
Diabetes mellitus, 260	29	25	4	10.3	8.3	8.4
Pellagra, 281	2	2		0.7		0.4
Vascular lesions of central nervous system, 330-334	310	178	132	110.0	100.2	105.0
Rheumatic fever, 400-402	1		1	0.4	1.1	2.2
Diseases of the heart, 410-443	751	493	258	266.5	294.2	264.5
Hypertension with heart disease, 440-443	152	65	87	53.9	67.1	39.6
Diseases of the arteries, 450-456	55	35	20	19.5	17.3	15.6
Influenza, 480-483	13	11	2	4.6	4.7	3.3
Pneumonia, all forms, 490-493	61	30	31	21.6	28.8	21.4
Bronchitis, 500-502	4	3	1	1.4	0.7	0.7
Appendicitis, 550-553	2	1	1	0.7	1.8	0.4
Intestinal obstruction and hernia, 560, 561, 570	11	5	6	3.9	2.2	4.0
Gastro-enteritis and colitis, under 2, 571.0, 764	8		8	2.8	1.1	2.2
Cirrhosis of liver, 581	12	7	5	4.3	4.0	2.2
Diseases of pregnancy and childbirth, 640-689	7	3	4	11.2	8.1	21.8
Congenital malformations, 750-759	39	28	11	6.4	5.0	4.0
Accidents, total, 800-962	165	114	51	58.6	56.2	58.1
Motor vehicle accidents, 810-835, 960	71	57	14	25.2	25.2	26.2
All other defined causes	386	220	166	137.0	128.0	141.0
Ill-defined and unknown causes, 780-793, 795	73	28	45	25.9	33.9	29.4

*Rates: Birth and death—per 1,000 population; Infant deaths—per 1,000 live births; Fetal deaths—per 1,000 deliveries; Maternal deaths—per 10,000 deliveries; Deaths from specified causes—per 100,000 population.

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SYMPTOMS AND TREATMENT OF INSECTICIDE POISONING

C. J. REHLING, PH.D.

State Toxicologist

Auburn, Alabama

Recent years have marked a pronounced change in agricultural insecticides with the appearance of highly potent contact poisons. These are now used almost exclusively. In contrast to the older stomach poisons such as arsenic, these newer synthetic compounds enter through the exoskeleton of the insect. The toxicity is quite high toward insects and usually also toward man. Agricultural workers and children accidentally exposed may present a medical emergency in any area.

Though many workers have reported on the symptoms, mechanism of action and pathology of many of these newer insecticides, summary compilation and review of pertinent practical information on the subject is now readily available.^{1, 2, 3} The U. S. Department of Health, Education, and Welfare publication³ on the subject is especially recommended.

In Alabama the cotton boll weevil is probably the greatest insect enemy and various dusts containing such chlorinated hydrocarbons as BHC, DDT, toxaphene, lindane, and dieldrin have found extensive use for control. Other insecticide uses are mainly in the specialty areas of truck farming, green house management, and ornamental plants. Organic phosphorus compounds make their appearance in such specialty uses, as in the peach orchards of Chilton County. Others are appearing on the market in various preparations designed to control such household pests as flies, mosquitoes, and roaches.

Insecticides may be broadly classified into three

general groups, based upon their mode of action: (I) gastro-intestinal or stomach poisons such as arsenic that depend upon ingestion and absorption for their toxic action; (II) the chlorinated hydrocarbons such as toxaphene, DDT, and BHC that are primarily central nervous system stimulants and are effective by direct penetration; (III) the organic phosphorus compounds such as parathion and TEPP that are potent cholinesterase inhibitors and act through direct penetration.

Group I: Arsenic continues to find some use in ant poisons and in some gardens, perhaps in part because of residual material purchased earlier. It still finds some use as a homicidal poison. Arsenic enters the body through the gastro-intestinal tract where the usually irritating effects of the earlier stages present a clinical picture of the common "food poisoning" case of bacterial origin. Differential diagnosis can be readily made through chemical analysis of the urine. Early vomitus is also helpful as a specimen for such tests. After the stomach has been emptied, the physician should institute treatment with versenates to leach the absorbed poison from the tissues. Dehydration is a usual problem until vomiting and diarrhea are brought under control. Ingested large doses may cause death within a very few hours due to shock, but the usual course requires some days to cause death.

Group II: The chlorinated hydrocarbon insecticides number some dozen or so compounds in use at present. The table will give some idea of relative toxicities to man. Generally, the dermal LD₅₀ dose approximates two to three times oral LD₅₀ as has been determined on white rats.^{3, 4}

Though a general group similarity in physiologic action exists, there are qualitative as well as quantitative differences. Fats and oils will enhance

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3. U. S. Department of Health, Education, and Welfare: Clinical Memoranda on Economic Poisons, Com. Disease Center, Atlanta, Georgia, 1956.

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INSECTICIDE POISONING

RELATIVE TOXICITIES OF INSECTICIDES

Compounds	Relative Toxicity
Chlordane	High
Chlorobenzilate	Moderately high
DDA	Moderately high
DDE	Moderately high
DDT	High
Dieldrin	Very high
Dilan	Relatively low
Endrin	Very high
Lindane (BHC)	High
Methoxychlor	Relatively low
Toxaphene	High

the skin absorption of these compounds. In addition to nervous symptoms and convulsions, these compounds also may induce later depression, loss of equilibrium, nausea, and even diarrhea. Symptoms commonly do not arise until an hour or more after exposure. Even in cases of acute poisoning, death may not follow until several days after ingestion.

Most of this group of compounds will result in some storage in fatty tissue in an inactive form and elimination is quite gradual. The urine permits demonstration of some of these chlorinated compounds as does the fatty tissue. Most of the known cases of poisoning in man have been complicated by action of the solvent used (kerosene, benzene, xylene) so that extensive, complete information is lacking. Possible solvent effects should not be overlooked and, indeed, may be dominant.

According to U. S. Public Health Service recommendations, the physician's treatment should first be directed toward sedation of the patient where indicated, and removal of any ingested poisons from the stomach. Aspiration of oily gastric content is especially to be prevented. Oil laxatives should be avoided. Soap and water should be used to cleanse the skin of these insecticides. Avoid use of oils and organic solvents as they promote absorption of the poison.

Pentobarbital and phenobarbital are reported as chosen sedatives to control convulsions and other nervous symptoms. Calcium gluconate has also been used to augment the barbitals. Epinephrine is contraindicated.

Group III: The organic phosphorus poisons are a group of similar acting, potently toxic compounds that act as contact poisons to insects. They are highly toxic to man and may enter the body by ingestion, by skin absorption, or by inhalation. The latter two routes provide the usual danger to agricultural workers and formulators. Dermal exposure is common, where absorption is enhanced by associated fats, oils, and petroleum solvents.

Several hours are usually required after dermal exposure before incapacitating symptoms, such as blurred vision, giddiness, cramps, nausea, and muscular twitching, appear. Other symptoms include diarrhea, nervousness, chest discomfort, salivation, convulsions and coma. Pulmonary edema may develop in some cases. Deaths usually occur in 1 to 24 hours.

The organic phosphorus insecticides act primarily by reducing the cholinesterase level in the blood. Chronic poisoning may therefore proceed without incident until a critical level is reached. Symptoms may then appear suddenly and the patient continue to be quite sensitive to the compound until after the enzyme level is again restored. Laboratory measurement of this enzyme level can be of distinct help, but diagnosis must be made in terms of the normal for that individual. In absence of cholinesterase readings, phosphorus insecticide poisoning may be confused with gastro-enteritis, heat exhaustion, pneumonia, or asthmatic attack unless specific history of exposure is available.

Generally, these organic phosphorus compounds cannot be chemically identified in the urine or tissues. They are readily hydrolysed and the metabolites cannot be distinguished. Hence, a differential diagnosis cannot be made through chemical identification of the original compound.

The U. S. Public Health Service recommends first aid treatment with repeated doses of 1/100 grain atropine sulfate. Continued treatment consists of intravenous injections hourly of 1/30 grain of the drug by the physician. Evidence indicates that subjects poisoned with these phosphorus insecticides have an increased tolerance for atropine. Keep the patient fully atropinized and under constant observation for at least 24 hours. Artificial respiration and oxygen therapy preparations should be made since cyanosis may develop from depression of the respiratory center by the poison.

Solvents: Various solvents used with Groups II and III are worthy of attention. Of these, kerosene and its related petroleum fractions are quite commonly used, although xylene and toluene are also encountered. These solvents enhance the absorption of the insecticide as well as exerting their own inherent toxicity. Indeed, the symptoms from solvent effects may be indistinguishable from those of the insecticide. If the material has been ingested, great care should be exercised at all times to avoid aspiration into the lungs. Relatively minute amounts of these solvents readily cause bronchopneumonia and pulmonary edema when aspirated. Saline laxatives should be used, since oils may aggravate the problem.

These solvents act as local irritants and the absorbed material has a general narcotic effect that

may or may not be preceded by a period of excitement. Stimulants may be used symptomatically. Experience indicates that, after removal from the

stomach and if bronchopneumonia by aspiration is avoided, recovery is usually made without incident where the solvent only has been ingested.

COOLEY'S MEDITERRANEAN ANEMIA
REPORT OF CASE IN A CHINESE CHILD

JOHN B. CROW, M. D.
Birmingham, Alabama

and

GEORGE BECKER, M. D.
Houston, Texas

Cooley's anemia, a rare hemolytic anemia characterized by progressive anemia, mongoloid facies, splenomegaly, retarded growth, and bone changes related to marrow hyperplasia, occurs primarily in children whose families are of Mediterranean origin.¹ This disorder is extremely rare among the Chinese, only eleven cases having been reported in the literature.

CASE REPORT

This 7½ year old native born Chinese female was seen in consultation because of progressive anemia. She was well until six months of age when pallor of the face was noted. At eleven months of age, fever and diarrhea developed, and she was treated with a sulfonamide; two weeks later puffiness of the face was noted. Study of the urine revealed a trace of albumin and a few white blood cells. While being evaluated for the possibility of acute glomerulonephritis, the patient was noted to have three fingers-breadth splenomegaly. The hemoglobin was 45%. Although the urine returned to normal during the next two months, the anemia persisted. The white blood cell count was elevated (mean of 26,000 with a range of 14,400 to 36,500), and from 1950 to 1952 the patient was observed for the development of an overt leukemia. During this time the spleen continued to enlarge and the liver became palpable.

In 1952, smears of the patient's blood revealed classical findings of Cooley's anemia: the red blood cells were extremely microcytic and hypochromic with marked anisocytosis and poikilocytosis, occasional polychromatophilia, and rare stippling. There were seven nucleated red blood cells per one hundred white blood cells. Dr. Janet Watson, Associate Professor of Medicine, New York College of Medicine, reviewed these slides and concurred in the findings. At Dr. Watson's suggestion the patient was given a course of ferrous sulfate for two months to eliminate the possibility of a superimposed iron deficiency. Al-

though there was a remarkable response to iron therapy initially, this improvement did not continue, and the blood smears examined by Dr. Watson during April 1953 were still very typical of Cooley's anemia.

During October 1952 the patient was admitted to the Taiwan University Medical College, Taipei, Taiwan, for further evaluation. Laboratory studies at that time were as follows: WBC 22,900; differential WBC: polymorphonuclear neutrophils 28%, basophiles 1%, eosinophiles 2%, basophilic myelocytes 11%, lymphocytes 53%, monocytes 5%. Nucleated RBC 44/100 WBC. Poikilocytosis, polychromatophilia and target cells were present. Platelet count 115,000. Reticulocytes 12%. RBC 3.72 million; Hgb 55%; Hct. 25; MCV 75; MCH 22.8; MCHC 34%; mean cell diameter 6 microns. Fragility test: beginning hemolysis at 0.52% saline; complete hemolysis at 0.28% saline. Bleeding time 3 minutes; coagulation time 5 minutes, 30 seconds. Serum van den Bergh positive, indirect reaction; total serum bilirubin 0.85 mg%. Total serum protein 7.5 gm%; cholesterol 222 mg%; Takata-Ara test negative; NPN 27.2 mg%; blood sugar 92 mg%; STS negative. Urine: urobilinogen and urobilin positive, parasites and ova negative. Chest x-ray showed moderate enlargement of the heart and increased bronchovascular markings in the right lung field. The ribs revealed spongy architecture with expansion of the marrow spaces and thinning of the cortex. X-ray of the skull and extremities showed thinning of the frontal cortex and "hair standing on end" appearance of the parietal area. There was loose trabeculation of the phalanges, metacarpals, and metatarsals, with thinning of the cortices, and rectangular appearance of metacarpals in which mosaic trabeculation was apparent. Thinning of the cortices was observed at the lower ends of the femurs and upper parts of the tibiae.

Examination of the patient on 16 April 1956 disclosed an underdeveloped child with mongoloid facies and a protuberant abdomen. The liver was firm, non-tender, and descended 6 cm. below the right costal margin in the mid-clavicular line. Laboratory studies revealed: RBC 1.87 million; Hgb 50%; WBC 8,200; differential WBC: polymor-

This case was observed by the author during a tour of duty with the U. S. Army and the U. S. Navy on Taiwan (Formosa).

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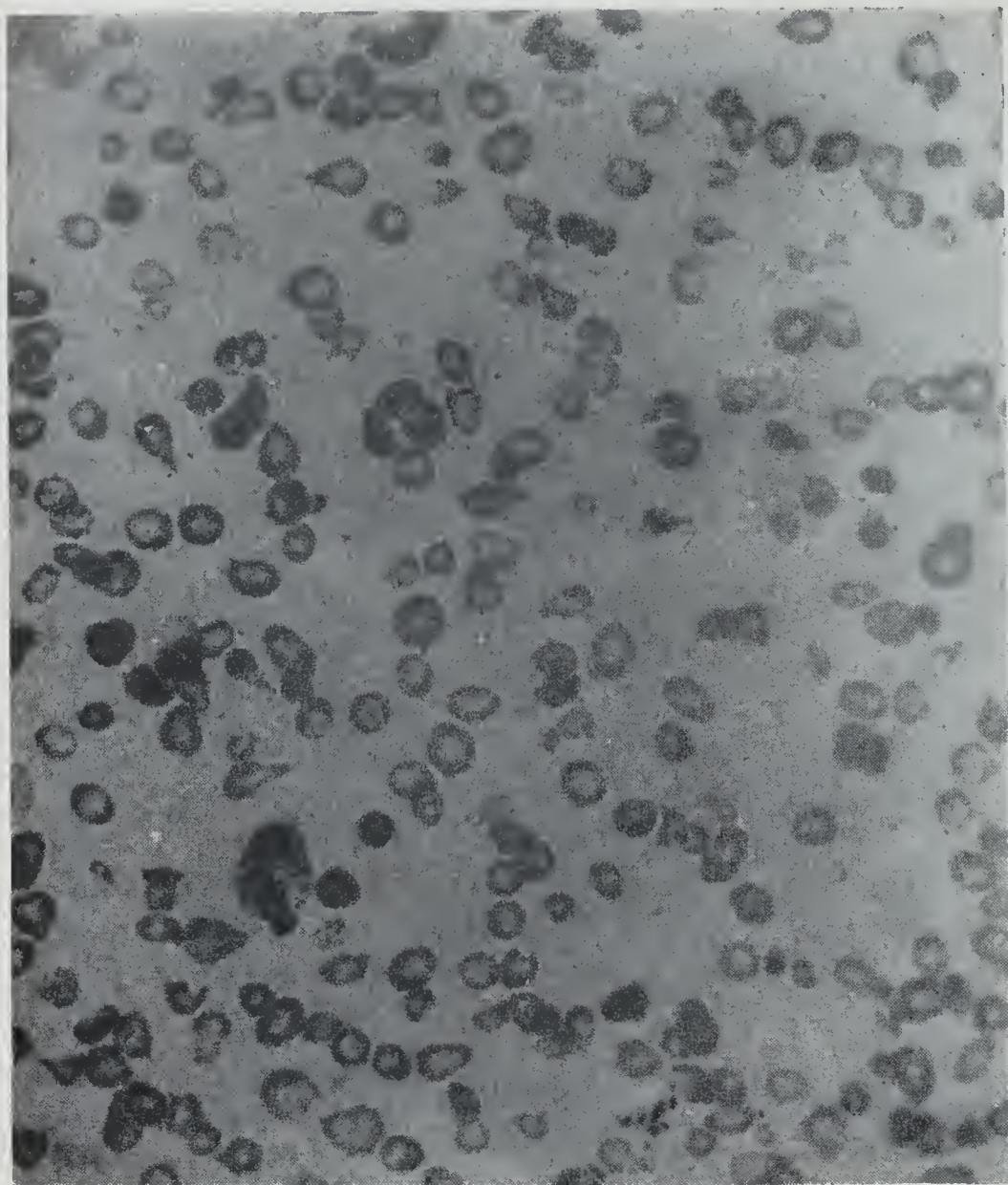


FIGURE 1
Patient's peripheral blood smear, X 400

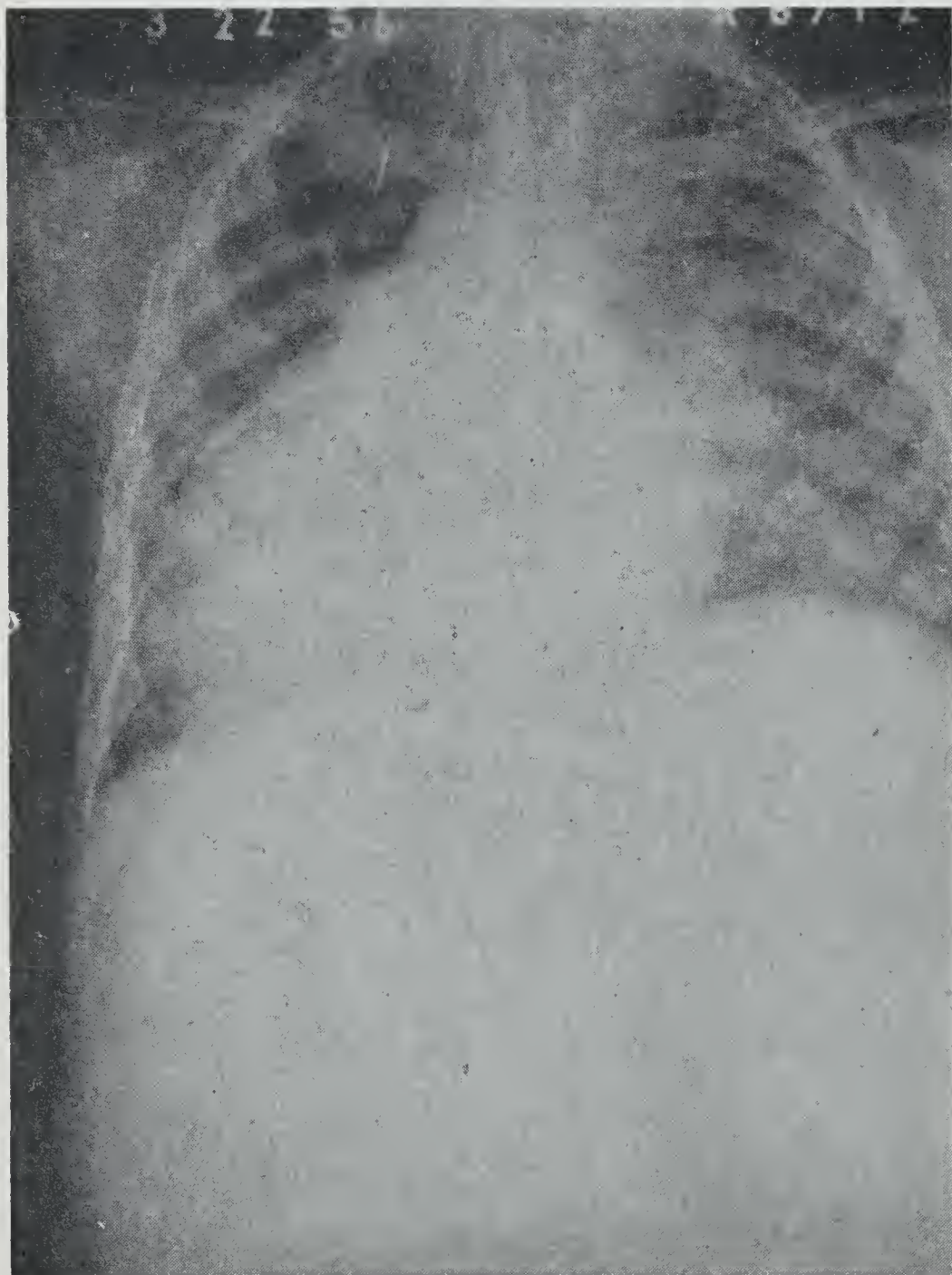


FIGURE 2
Patient's chest x-ray, showing cardiomegaly and changes in architecture of ribs and clavicles.



FIGURE 3
X-ray of legs and of hands, revealing the typical bone changes.

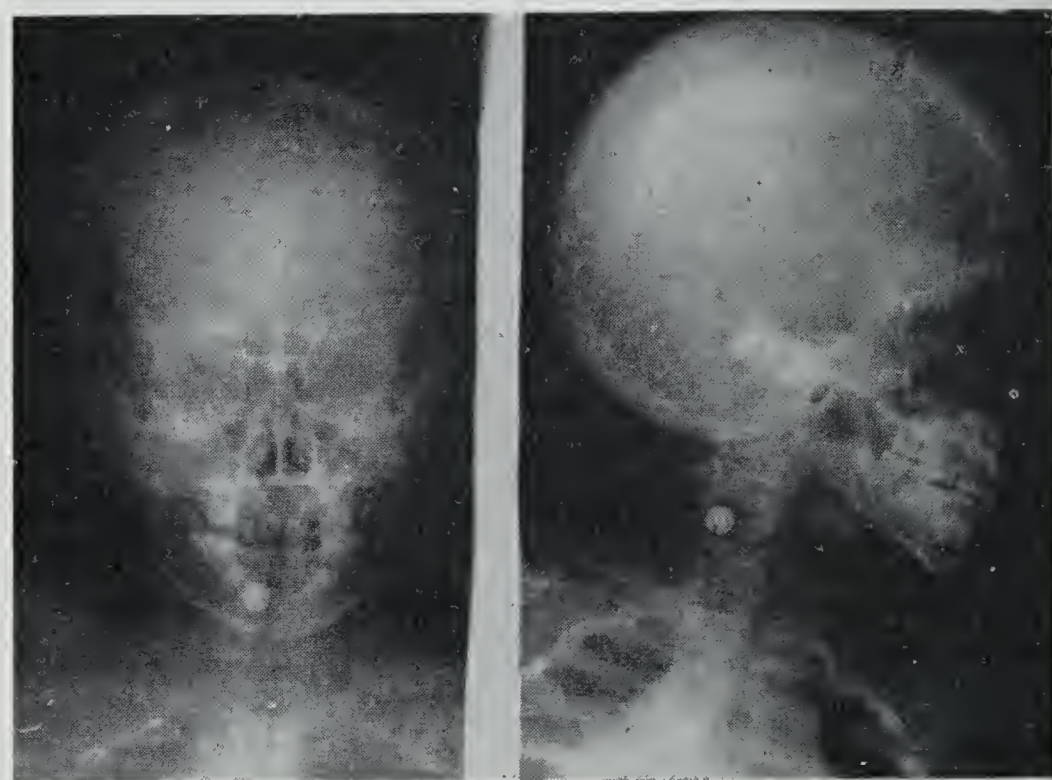


FIGURE 4
X-ray of skull, revealing the bone changes.

phonuclear neutrophils 44%, lymphocytes 56%. Marked anisocytosis, poikilocytosis, microcytosis, hypochromia, and occasional polychromatophilia and stippling were present (figure 1). X-ray examination of the chest, legs, hands and skull presented the same findings as reported above (fig-

ures 2, 3, 4). The spleen was quite firm, non-tender, and descended 16 cm. below the left costal margin in the mid-clavicular line.

Paper electrophoresis of hemoglobin from the patient, her mother and her father was performed by the 406th Medical General Laboratory, APO 343, Japan. The patient's hemoglobin demonstrated type F hemoglobin; the one-minute alkaline denatured hemoglobin indicated that the percentage of fetal hemoglobin was 57.5%; the remaining 42.5% was assumed to be type A hemoglobin because of the identical electrophoretic mobilities of type A and type F. The patient's mother had homogeneous type A hemoglobin; her type F hemoglobin value was 0.67%. The patient's father also had homogeneous type A hemoglobin, and a value of 1.60% type F was obtained by alkaline denaturation.

Studies of the peripheral blood smears of the family were performed by the 406th Medical General Laboratory. The father had a very marked hypochromia and anisocytosis. The younger brother (7 months old) had definite hypochromia. The sister (4½) had very marked hypochromia and moderate anisocytosis. The mother showed only a very mild hypochromia. The patient again demonstrated very marked hypochromia with anisocytosis, and rare target cells.

DISCUSSION

Cooley's anemia is a disease which involves approximately 4 percent of individuals of southern Italian extraction in one of its forms.² It has been noted in families of Mediterranean origin who have migrated to various parts of the world.³ Not only are persons of Italian and Greek ancestry involved but also other groups in the Mediterranean area,⁴ Negroes,⁵ and American Indians,⁶ have been found to have the disease and the trait. Indeed, it is doubtful if any national group is exempt.

The traits for both sickling and thalassemia have

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been found in a single family,⁷ and this disease has been found to coexist with pernicious anemia.⁸ This phase of the problem has been studied electrophoretically, and it has been demonstrated that the genes for abnormal hemoglobins may coexist in several combinations.^{9, 10}

Therapy in Cooley's anemia leaves much to be desired. Repeated blood transfusions appear to be the most beneficial. Iron therapy should be given with discretion because of the possibility of development of hemochromatosis.¹¹ Although splenectomy has been recommended,¹² it is of doubtful therapeutic value since it does not stop the progress of the anemia.¹³

SUMMARY

A case of Cooley's anemia in a native Chinese female child is reported because of the rarity of the disease in this racial group. The case reported is considered to be classical as regards physical findings, clinical course, and the blood picture and x-ray abnormalities. Electrophoretic studies of the hemoglobin of the patient and her parents are presented.

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Drinking Denatured Alcohol Causes Hypoglycemia—Drinking denatured alcohol may produce an illness similar to that of the "vomiting sickness of Jamaica," which is caused by eating wild berries, an Alabama physician said recently.

A severe and sometimes fatal drop in the amount of sugar in the blood is a sign of both illnesses, he said in the September 7 *Journal of the American Medical Association*.

Just why such a drop in blood sugar level, called hypoglycemia, results from drinking denatured alcohol or eating one kind of wild Jamaican berry is unknown, Dr. William J. Hammack, Birmingham, said.

It may be associated with malnutrition, a frequent occurrence in chronic alcoholism, in which the liver is damaged. The liver is no longer able to perform its normal breakdown of sugar into simpler components that can be used by the body.

Whatever the cause of hypoglycemia, it is a "grave medical emergency" because of the possibility of rapid brain damage or death. It must be recognized and treated immediately, Dr. Hammack said. Intravenous administration of dextrose solution helps relieve the condition.

THE USE OF CORTISONE DURING PREGNANCY

M. I. HYDE, M. D.

Mobile, Alabama

There is usually a remission of symptoms of the collagen diseases during pregnancy. Because a physician is seldom called upon to administer or observe the effects of cortisone or similar agents during gestation, this case is presented.

CASE REPORT

This 20 year old white female presented herself on 12-22-55 stating that her last menstrual period was 10-28-55. She had no complaints except amenorrhea. Past history disclosed that as a child she had hay fever and asthma and was allergic to all forms of salicylates. While she was visiting in Holland in June, she had soreness and stiffness of the fingers of her right hand, and, in July, shoulder pain and stiffness in her right hip. She had attributed these symptoms to the unaccustomed exercise in which she had engaged during her vacation.

Physical examination showed a well developed, well nourished white female appearing neither acutely nor chronically ill. Weight: 131 lbs. Height: 5' 4". B. P. 120/70. Temperature: 98.6. Pulse: 84. The lung fields were clear, the heart normal to percussion and auscultation. Neither liver, kidney, spleen, nor uterus could be palpated abdominally. Pelvic measurements were within normal limits. Pelvic examination showed the uterus to be soft and top normal in size, compatible with a two months gestation. Both adnexa were palpable and no abnormality was noted. Examination of the extremities revealed no deformity, limitation of motion, or varicosities. On her prenatal visit, 2-2-56, she complained of pain in the interphalangeal joints of her fingers and second tarsal joint of the right great toe. She was referred to an orthopedist who made the diagnosis of rheumatoid arthritis and recommended the use of cortisone because of the patient's discomfort

and her intolerance to salicylates. Laboratory studies done on 2-25-57 showed a uric acid of 3.1 mgm.%, sedimentation rate of 46 mm./hr., p.c.v. 37 vol.%, and hgb. 12 Gm.%. Symptoms gradually progressed, the involved joints becoming red, swollen, and tender.

Because of her fear that cortisone therapy might in some way complicate her pregnancy, the patient did not start therapy until her joints became so painful that she could not rest. On 3-29-56 she was started on prednisone 5 mgm., b. i. d. On this regimen she received prompt and dramatic relief from her symptoms, and the slow increase in size of the interphalangeal joints and second joint of the great toe was arrested.

The patient was most cooperative during her entire pregnancy so that weight gain was no problem. The dosage of prednisone was varied in order to give the least amount that would relieve symptoms. At the beginning of therapy the patient was followed by serial determinations of serum sodium, potassium, and calcium until it was evident that her electrolyte balance would not be disturbed. Pertinent data are presented in Table I.

The patient received during her prenatal course potassium chloride 0.3 Gm., t.i.d., aluminum hydroxide 15 cc., t.i.d.; as well as three prenatal capsules daily. She began labor spontaneously on 8-4-56. The first stage of labor lasted 7 hours and 10 minutes, the second stage 2 hours and 6 minutes, and the third stage 10 minutes. A 7 lb. 11 oz. normal female infant was delivered by outlet forceps under general anesthesia with R. M. L. episiotomy. At the onset of labor 100 mgm. of hydrocortisone was added to an intravenous infusion of 500 cc. of glucose D/W. Prednisone was started p. o. on the first day p. p. according to the following schedule: 1st day—10 mgm., q4h; 2nd day—10

TABLE I

Date	B. P.	Wt.	Prednisone	Blood Sodium	Blood Potassium	Blood Calcium
3-29-56	120/70	140	5 mgm. b. i. d.	135 meq.	3.6 meq.	6.2 mgm.
4- 5-56	120/70	139½	5 mgm. b. i. d.	138 meq.	3.4 meq.	
4-18-56	130/70	140	5 mgm. b. i. d.	139 meq.	3.9 meq.	
5- 5-56	110/70	140	5 mgm. b. i. d.	140 meq.	3.8 meq.	6.0 mgm.
5-16-56	110/70	140	10 mgm. every other day	140 meq.		
5-23-56	110/70	141	10 mgm. every other day			
5-31-56	110/70	141	5 mgm. daily			
6- 6-56	120/70	144	5 mgm. daily			
6-13-56	120/70	143½	5 mgm. daily			
7- 6-56	120/70	147	2½ mgm. daily			
7-13-56	120/70	148	2½ mgm. daily			
7-20-56	120/70	150	Stopped prednisone			

mgm., q6h;—3rd day—10 mgm., q8h; 4th day—10 mgm., q12h; 5th day—5 mgm., q12h.

The episiotomy healed well and the postpartum-period was uncomplicated.

COMMENT

The chief problems confronting the physician using cortisone during pregnancy are: 1) contra-indications, 2) pharmacological effects, 3) dosage, 4) management during labor, and 5) effect on the fetus.

1. DeCosta¹ lists the following contraindications for the use of cortisone during pregnancy: a) mental, b) congestive failure, c) diabetes mellitus, d) peptic ulcer, and e) tuberculosis.

2. Margulis² found, while using cortisone in toxemias of pregnancy, that the E. K. G. showed no effects of lowered plasma potassium. Plasma sodium and chloride remained within normal limits. There was no evidence of hypoglycemia or hyperuricemia.

3. The dosage needed to relieve symptoms varies from patient to patient. Gould³ used from 25 to 100 mgm. of cortisone daily in treating patients with rheumatoid arthritis. Samitz⁴ used a total of 1,500 mgm. in the last two trimesters of pregnancy. Singh⁵ used 100 mgm. daily.

4. Postpartum collapse occurs in women undergoing delivery if the function of the adrenals has been suppressed by recent administration of cortisone. Hunt and McConahey⁶ propose the following regimen: a) the intramuscular administration of cortisone at the onset of labor; b) a ready supply of 1:10,000 solution of norepinephrine; c) postpartum administration of decreasing dosage of cortisone until the maintenance level is obtained. The authors also stress the preoperative administration of 200 mgm. of cortisone intramuscularly daily for two days prior to surgery.

5. Fraser⁷ reports the production of congenital anomalies in mice when given cortisone for four consecutive days during various stages of pregnancy. The comparable dosage in humans would be from 2-8 Gm. daily. There have been no reports⁸ of congenital anomalies in humans that could be attributed to cortisone. Katzenstein and

Morris⁸ found one infant out of eight developed severe hypoglycemia 48 hours after delivery. The hypoglycemia was corrected without difficulty by the administration of fluids and cortisone.

SUMMARY

A case report of the use of cortisone during pregnancy without untoward effects on mother or infant is presented together with pertinent comments from the literature on this subject.

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Physician Gives Medical Advice on Flying—Physicians can do a lot toward easing the fear and discomfort some people associate with flying, an Air Force doctor said recently.

Writing in the September 21 issue of the *Journal of the American Medical Association*, Lt. Col. Frederick S. Spiegel (MC), U. S. Air Force, Washington, D. C., listed some of the things a doctor needs to know if he is to advise his patients about traveling by air.

He pointed out that more and more people are flying each year. Last year over 25 million passengers traveled on U. S. domestic air lines. Many people have had no experience with flying and go to their doctor for advice.

Among the things the doctor should know about airline regulations is that permission must be granted by the public health officials before any person with a contagious or communicable disease may be transported across state lines, the colonel pointed out.

Diabetics requiring insulin may travel only if their insulin and syringe are kept in their hand baggage in the passenger cabin, he said.

Physicians generally agree that a woman with an uncomplicated pregnancy is not "sick" and can travel safely. However, if she wishes to fly in the very late stages of pregnancy, she must present a certificate from her physician stating that she will not deliver "for at least 72 hours," Colonel Spiegel said.

Infants less than six weeks old are not generally transported by commercial carriers unless there are extenuating circumstances. Then a pediatrician's certificate is requested, stating that the infant is healthy and physically fit to fly.

Patients recovering from recent coronary thrombotic attacks or those suffering from coronary insufficiency need careful examination before being advised to fly. Anemic patients and those with certain types of respiratory difficulty also need careful checking, the author said.

"Children are only fair air travelers," the colonel said. Those under five years of age experience airsickness and ear trouble five to 10 times more frequently than adults.

The increased susceptibility to airsickness may be related to insecurity and apprehension, while the ear discomfort is associated with the difficulty of teaching children to swallow while descending in an airplane.

Airsickness in adults is no longer a major problem, but when it does occur, it is five times more frequent among women than among male passengers. As with children, this is probably due to anxiety and apprehension. Fear of airsickness probably hastens its development.

There are several effective remedies for those who develop airsickness. The same drugs also prevent it if taken before flight. The value of reassurance by the doctor in such cases cannot be over-emphasized, Colonel Spiegel concluded.

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MOTIVATION FOR CHILD SPACING

J. A. SIMS, M. D.

and

M. H. SIMS, M. D.

Talladega, Alabama

In July 1949, clinics were organized in the Talladega and Sylacauga Health Centers to make available advice about child spacing to women in the district who wished to plan their families. Special records were kept of the women attending these clinics, and in April 1957 all the case histories were reviewed to learn what the acceptance of the program had been and to obtain data about the women seeking such advice.

During the seven years and nine months that these clinics have been in progress there has been a total of 661 women (436 in Talladega; 225 in Sylacauga) who have attended and who either returned regularly for follow-up visits and for supplies or were visited by the Public Health Nurses routinely, and therefore follow-up information on all is available. The simple, easy to use gel-alone method* was the only method offered at the Talladega Clinic and also at the Sylacauga Clinic, with the exception of 24 women in the latter clinic who had previously used the diaphragm plus jelly method and wished to receive the same method again.

All the women attending either clinic for the first time did so after their six weeks postpartum check-up visit. They all requested the advice for the purpose of child spacing. They were referred directly from the postpartum clinic of the centers, by social agencies, by private doctors, or by self. The women came from both rural and urban areas, 71.6 per cent living in the rural areas. Of the clinic population 88.5 per cent was Negro. The average age of the women was 26.8 years, and of the husbands 27.4 years. All the women except two had received some education; 59.9 per cent completed one or more years up to the eighth grade; 35.9 per cent had one to four years of high school education; and 3.9 per cent had gone on for further education. The average number of previous pregnancies (ranging from one to 15) before attending the clinic for advice was 4.4 per woman. In this study 77.5 per cent of the women said they had never used any contraceptive measure previously. The methods used by the remainder included condom, withdrawal, douche, diaphragm plus jelly, jelly alone, and suppository.

At the time of the first clinic visit the history

From the Talladega County Health Department, with which the authors were formerly identified.

*Preceptin vaginal gel provided through the courtesy of the Ortho Pharmaceutical Corporation, Raritan, New Jersey.

was taken and a pelvic examination performed. The women were given a simple talk about the physiology of menstruation and conception, taught how to use the method recommended, and instructed to carry out the directions under supervision until they thoroughly knew the procedure.

It was interesting to note that although the women said they wanted to space the next pregnancy, motivation was not sufficiently strong in 21 women, who had a pregnancy sometime after their first visit, for they never followed the advice. Sometimes the wife, or husband, or often both decided that another pregnancy was wanted and it made no difference how soon conception occurred. The average age of the women of this group was 27.2 years, and the average number of living children before receiving advice was 4.3 per woman.

Another group having a pregnancy consisted of 12 women who used the method irregularly over periods ranging from two to 32 months, at times using no protection and not caring if conception did occur. Eight women had a pregnancy following incorrect use of the method, such as introducing the gel after coitus or at times substituting another method of their own. The motivation for use is often strong enough for the couple to follow advice as long as material is on hand but not for them to return and continue to obtain more supplies even though all the material was made available to them free of cost. Seven women became pregnant after running out of supplies, having used the method 1½, 1½, 2, 3, 4, 7 and 11 months, respectively.

Of the 47 women who spaced their pregnancies by using the method at first regularly and then irregularly, the actual months of constant use unfortunately was not available in 18 cases. However, of the remaining 29, the use ranged from 3 to 27 months, the average duration of regular use being 10.7 months. The average number of preclinic pregnancies for this group of 29 women was 5.3, and the average age was 26.8 years. After delivery the women returned to the clinic and requested the same method again. Up to the date of this analysis the use of the method again by the total group of 47 women ranged from six to 36 months, an average of 15.0 months.

There were 19 other women who planned their pregnancies using the method constantly up until the time they definitely stopped for another pregnancy. Conception occurred within a month or two. The months of use of this group ranged from

8½ to 68 months, the average use being 31.1 months. Since the opening of this clinic, several women have had two planned pregnancies with spacing from 14 to 23 months between the pregnancies.

Motivation to use a method for the control of conception must be present in both the husband and wife. The length of the period of constant use of a method to space the next pregnancy rests upon the decision of the couple, and in our clinics ranged up to the time of this analysis from three to 88½ months. At the time of the initial visit to the clinic it was not unusual to hear the women state that they had had four pregnancies in four years, six pregnancies in eight years, or even 15 pregnancies in 15 years. One woman, age 23, had had five pregnancies in five years but since attending the child spacing clinic has not had a pregnancy for 63 months; and another woman, age 37, who had had 11 pregnancies in 14 years, said it was the longest time (22 months) since her marriage that she had not been pregnant.

Both the husbands and wives found the gel-alone method satisfactory and they had no complaints. Some of the women stated that it was the first method that had been found acceptable by both husband and wife and therefore could be used constantly. The gel-alone method is still being used by all our clinics with satisfactory results.

Medical Education Congress Set for February 9-11—Problems confronting medical education in the rapidly changing scene will be the main topic of concern at the 54th annual Congress on Medical Education and Licensure February 9-11. Sponsored by the AMA Council on Medical Education and Hospitals, the Federation of State Medical Boards of the United States and the Advisory Board for Medical Specialties, the Congress will be held at the Palmer House, Chicago. The conferees will view medical education's broad potential in the light of four factors—the changing characteristics of the nation's population, sociological trends, economy and medical knowledge—and the implications of these factors on medical education, medical research and medical care.

In addition, four workshop committees—composed of representatives from the AMA, the Council, the AAMC, higher education, government, business, insurance, labor and agriculture—will discuss various problem areas, endeavor to clarify questions that need to be raised and recommend possible ways that medicine can assume the leadership in solving these problems. The committees' reports will be presented before the entire Congress for discussion from the floor.

On Monday morning, February 10, the Council will conduct its annual co-sponsored meeting with the Advisory Board. This session will be devoted principally to discussions of problems in graduate medical education created by the changing status of the patient and the role of the community hospital in graduate medical education. The Federation will hold its second examination institute on Saturday, February 8, and its regular meeting on Tuesday, February 11.

A. M. A. Committee Warns All Fevers Aren't Flu—The American Medical Association's special committee on influenza has warned against attributing all flu-like symptoms to Asian influenza.

In its first comprehensive report to physicians on Asian influenza, the committee quoted an Army physician as saying, "All that fevers is not flu." When a disease is widespread, there is a tendency to attribute the symptoms of most patients to the new disease. Physicians particularly must be aware of this fact, the report said.

Only by isolating the causative virus from throat swabs of ill patients can a definite diagnosis of Asian flu be made.

In the report in the September 28 A. M. A. Journal, the committee listed eight main conclusions about the disease and summarized the situation as it now stands. An accompanying editorial pointed out that "any change in the incidence of reported cases, or in the virulence of the virus, might warrant a completely new approach toward the disease."

As of now, the committee has reached these conclusions:

—The probability of an epidemic of Asian influenza this fall or winter is great.

—The United States population has no natural immunity to this type of influenza.

—The most satisfactory vaccine possible has been developed.

—The supply of this vaccine should soon be adequate to protect essential national services.

—The vaccine is safe, except in patients with known allergy to eggs.

—The course of the disease is moderate in most patients, and there have been very few deaths reported due to the disease.

—It is possible, but not probable, that the disease will increase in virulence.

—Antibiotic and sulfonamide drugs are not effective in uncomplicated influenza cases. If secondary bacterial infection occurs as a complication, adequate treatment with these drugs should lessen the seriousness of the infections.

The committee pointed out that vaccine is now available in limited quantities. Much more will become available during the next few months, but until then physicians will have to decide how best to conserve the supply of vaccine. Two methods of injection have been suggested. One calls for one cubic centimeter to be injected subcutaneously. The other calls for one-tenth of a cubic centimeter to be injected intradermally.

Until further information about the effectiveness of these two methods is available, the physician will have to decide for himself how the vaccine should be given to his patients, the report said.

The symptoms of Asian influenza consist of chills that occur with very little warning and temperature that climbs to 103 or 104 F and remains in that range for three to four days. The fever is accompanied by headache and general muscle pains. As the fever subsides and the aches and pains gradually vanish, the patient is generally left weak.

There is actually no specific treatment. Naturally the healthy person with good habits of eating and sleeping "stands the best chance in a bout of any infectious disease," the report said. Once Asian flu strikes, bed rest and fluids are necessary. Hospitalization should be limited to patients who develop complications or to those with other diseases which might be aggravated by influenza.

All patients should be isolated insofar as it is convenient. . . .



HAZARDS OF PROLONGED PREDNISONE THERAPY OF RHEUMATOID ARTHRITIS

Physiologic side effects occurring during the administration of the newer potent synthetic adrenal steroid analogues may be much more severe than was originally anticipated. The continued widespread use of these drugs, often without adequate indications, may bring disastrous results. Cessation of the therapy in rheumatoid arthritis results in a marked exacerbation of the disease, often exceeding that present before beginning the therapy. Sudden death has been reported following sudden withdrawal of the drug.¹

In a recent report on a series of 49 patients with rheumatoid arthritis treated with prednisone during the past three years, major side effects occurred in 23 patients, or nearly 50 per cent. The most serious of these reactions consisted of peptic ulcer in 12 patients (24 per cent) and compression fractures in 9 patients. Other complications of prednisone therapy included polyarteritis nodosa, fulminating infections, psychosis, and diabetes. Of the total 49 patients, 8 patients died during the three-year period. Five of these deaths could be attributed to therapy with prednisone.¹

Although prednisone is an effective and potent anti-inflammatory agent, it can be seen that due to its serious, at times fatal, side effects, it must be used with caution.

NEW TEST FOR CANCER OFFERS LIFE FOR THOUSANDS

A nationwide program emphasizing an annual cytologic test for uterine cancer for all women is urged by Dr. Charles S. Cameron, former Medical and Scientific Director of the American Cancer Society, as a means of reducing the cancer mortality rate.

"Foremost medical opinion is convinced that if every woman in the country had this examination every year, the number of deaths from uterine cervical cancer would be cut by as much as 90 per cent," Dr. Cameron writes in a new 25-cent

1. Bunim, J. J.; Black, R. L., and Yielding, K. L.: Benefits and Hazards of Prednisone Therapy in Rheumatoid Arthritis, Abstracts, Ninth International Congress on Rheumatic Diseases, Toronto, 1957.

Editorials

pamphlet, *Cell Examination—New Hope in Cancer*, published by the Public Affairs Committee, 22 East 38th Street, New York City.

"This would mean an annual saving of 16,000 lives," Dr. David A. Wood, President of the American Cancer Society, 1956-57, declares in the introduction to the pamphlet.

"To make any real dent in mortality figures," Dr. Cameron points out, "a campaign will have to be launched on a national scale that will be carried forward on several fronts at once."

"Hand in hand with a public education program to alert American women to the new lease on life this procedure affords . . . must go the enlargement of facilities for carrying out cell examination for uterine cancer. More cancer preventive and diagnostic centers must be established for persons who are apparently well," Dr. Cameron continues.

"The cooperation of two kinds of physicians is needed for cytodiagnosis," Dr. Cameron adds—"the pathologist who specializes in analyzing body tissue and fluids . . . and all doctors who in any phase of their practice give female examination . . . The role of the family doctor is equally important. He bridges the gap between the public and the pathologist."

"The biggest hurdle of all," he continues, is "facilities for screening slides. More pathologists will have to specialize in cytology, more cytotechnologists recruited, and more laboratories established to take care of the increased demand."

"The American Cancer Society and the National Cancer Institute are joining hands with pathologists and doctors to help enlarge cytologic facilities," Dr. Cameron reports. "They have both given grants to the National Committee for Careers in Medical Technology for the production and utilization of a recruitment film to induce more young people to enter the career of cytotechnologist."

Meanwhile, "women need not wait hopelessly until science discovers a cure for cancer. They can insure themselves against the scourge of at least one of the major types of cancer now by insisting on a cytologic examination for uterine cancer each year after they are 35," Dr. Cameron concludes.

"Every individual literally holds his own life in

his hands as he makes the decision whether or not to bother about examinations . . . When they accept it as a routine step in medical care, not only will a great victory have been won over one form of cancer but early detection of other kinds will have been made easier."

Cell Examination—New Hope in Cancer is the 252nd in the Public Affairs Pamphlet series which is now in its 22nd year. The series has included many other distinguished titles covering social and economic problems, family relations, health and intergroup relations.

JOINT BLOOD COUNCIL LAUNCHES TRANSFUSION SERVICES SURVEY

More than 5,200 hospitals, blood banks and other blood transfusion services have received by mail a questionnaire from the Joint Blood Council, representing a major effort to provide a sort of mariner's guide to the vast and almost uncharted sea of blood banking and related activities in the United States and territories.

Recipients of the questionnaire are urged to fill it out and return it to the Joint Blood Council because of what this survey of blood transfusion services will mean to them, individually, and to the nation as a whole. They are reminded that, as they sow, so shall they reap in terms of the new light it will shed on the often confused and confusing blood banking picture.

President Eisenhower has hailed the objectives of the Joint Blood Council and its member institutions in seeking to coordinate the nation's blood banking facilities, practices and terminology. On January 27, 1956, he wrote to Dr. Leonard W. Larson, Council president, praising the American Association of Blood Banks, the American Hospital Association, the American Medical Association, the American National Red Cross and the American Association of Clinical Pathologists for their combined efforts in making this "important contribution to the welfare of our country."

With success depending so greatly on the number and quality of replies to its questionnaire, the Joint Blood Council points out that it is part of what President Eisenhower, in his letter to Dr. Larson, called "a humanitarian effort in keeping with the American tradition."

The questionnaire represents a second phase of the Joint Blood Council's efforts to bring the blood transfusion picture into proper focus. The first phase was a postal card survey of blood usage during the calendar year 1956. That produced some eye-opening information on the sources of blood in the United States. It also furnished the first reliable estimate in six years of how much blood is being transfused in the nation.

The Council itself grew out of the need for closer cooperation among facilities which handle blood and between the independent blood banks and the regional and national blood banking systems. Its survey of blood transfusion services is another step in that direction. The Council's preliminary research has firmed its conviction that blood transfusion services in this country are operating under handicaps that cry out for remedy; likewise the Council's realization that remedies can be applied properly only with accurate diagnosis. The current questionnaire will help clarify the symptoms that will make diagnosis and remedy possible.

In seeking a fuller understanding of blood's problems, the Council shares with the medical profession as a whole the sad recognition of such deficiencies as that wherein no completely safe or entirely satisfactory system exists for exchanging blood or blood credits on a nationwide scale. Moreover, those involved in blood transfusion services are hampered by terminology and nomenclature. For example, there is no precise definition of the frequently used term "unit" of blood. In some instances a "unit" is 480 cc.; in others 250 cc., and there are further variations.

The term "blood bank" comes readily to many tongues, but what does it mean? Is it simply a place where whole blood is stored under refrigeration, or do such factors as recruitment of blood donors, processing and distribution enter in? And if so, to what extent?

With such questions begging for answers, no wonder the Joint Blood Council's file of correspondence looking forward to results of the survey of blood transfusion services is studied with such expressions of interest as these on the part of member institutions:

"The American Hospital Association is aware of the importance of the nationwide survey and offers to assist and cooperate in every possible way."

"The Board of Trustees (of the American Medical Association) authorized me to offer the Joint Blood Council all the facilities and resources of AMA which may be of assistance in your project."

"The American Association of Blood Banks has always been eager to learn more about blood banking facilities."

The president of the American National Red Cross said, "I can assure you that the American Red Cross is interested." His letter states further that staff assistance may be called on for any assistance necessary.

Under the threat of atomic attack, the federal government is vitally concerned with blood supply since blood would be a first requirement of nuclear casualties. An Office of Defense Mobilization outline of the new national blood program emphasizes the need for coordination in line with Joint

Blood Council aims. Civil Defense headquarters in Washington has asked for guidelines regarding the nation's capacity to supply whole blood in emergency. The Council's schedule of questions will help supply those guidelines. Among the questions it asks concerning the nation's blood transfusion services are these:

Are they capable of rapid expansion in time of emergency?

Where are they located?

How are they organized and operated?

What areas do they serve?

What is their annual volume of business?

How do they relate to allied services, such as tissue banks?

With the promise of getting answers to such questions, federal agencies concerned with hospitals eagerly anticipate the results of the Joint Blood Council's survey of blood transfusion services. Veterans Administration officials have offered to assume responsibility for distributing and collecting the questionnaire at hospitals within their jurisdiction.

At the industry level, pharmaceutical and hospital supply firms will profit by the blood survey. The facts it assembles will enable them to plan with more assurance in producing blood derivatives, blood bank supplies and equipment, laboratory apparatus and research instruments.

Thus the Joint Blood Council emphasizes that the sooner its questionnaire is filled out, analyzed and interpreted, the sooner will there be a general fund of information necessary to the proper development of a national blood program—a well known and respected transfusion service to the people of the United States through the medical profession.

RELIEF FOR REACTIONS TO PENICILLIN

Relief from adverse penicillin reactions, estimated to affect a minimum of 600,000 persons annually, may be available before the end of this year.

Two Midwest physicians, in papers presented at the June 1957 meeting of the American Medical Association convention, reported highly successful results in the treatment of penicillin reactions by the injection of a newly developed penicillinase. Capt. G. M. Davis, Medical Corps, U. S. Navy, of Great Lakes Naval Training Station, and Dr. R. M. Becker of Madison, Wis. each reported that, in a significant number of clinical tests, allergic manifestations of penicillin reactions promptly receded following the injection of penicillinase.

Dramatic relief occurred within a period ranging from a few hours up to 24 hours and most patients had complete freedom from itching and swelling in 24 to 72 hours, they reported. An additional ad-

vantage of the new therapy is the absence of recurrence of symptoms even when other supportive therapy is stopped.

For these reasons, Dr. Becker told his A. M. A. audience, "penicillinase should be kept on hand in every doctor's office or hospital where penicillin is administered."

Informed pharmaceutical industry sources estimate that at least 60 million courses of therapy of penicillin and penicillin combined with other antibiotics will be administered this year in the United States. This amounts to a course of therapy for slightly more than one out of every three persons in the country.

Allergic or other reactions to this penicillin therapy occur in from 0.5 per cent to as high as five per cent of the patients receiving penicillin. The nature and severity of the reactions in part depend upon the amount and type of penicillin administered, the method of administration, and certain other considerations.

If the "average" incidence of penicillin reaction is estimated at only one per cent of the total number of courses of treatment given this year, there will be 600,000 patients showing varying reactions ranging from annoying rashes up to severe shock, and even death.

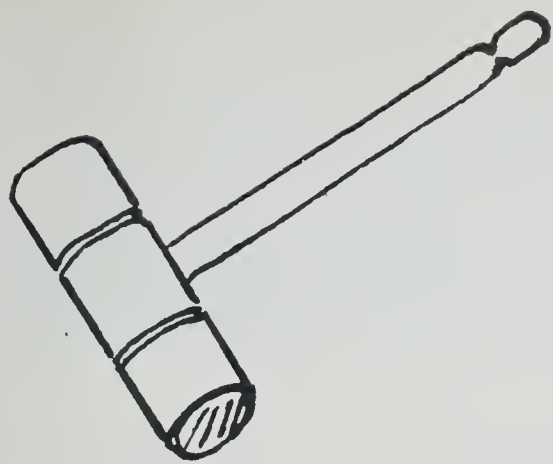
DR. GALBRAITH APPOINTED SOUTHERN MEDICAL COUNCILOR

Dr. J. Garber Galbraith, Birmingham, has been appointed a member of the Council of the Southern Medical Association from Alabama for a regular term of five years which will begin at the close of the Miami Beach meeting in November, the appointment having been made by the President-elect, Dr. W. Kelly West, Oklahoma City, Oklahoma. Dr. Galbraith succeeds Dr. Lee F. Turlington, Birmingham, whose term expires with the close of the Miami Beach meeting and who, having served the constitutional limit, is not eligible for reappointment.

JOHN R. IRBY LECTURE IN RHEUMATIC DISEASES

An annual lectureship in the field of rheumatic diseases has been established by the Medical Center from the income of an endowment fund established by the terms of the will of the late John R. Irby. It is to be known as "The John R. Irby Lecture." The guest lecturer this year will be Dr. Currier McEwen, Chief of the Rheumatic Disease Section and Associate Professor of Medicine, New York University, School of Medicine. He has selected as his subject, "Present Status of Adrenal Steroids in the Treatment of Acute Rheumatic Fever," a topic that will be of wide interest to the members of the profession of the state.

The lecture will be held in the Hillman Auditorium of the Medical Center at 8:00 P. M., December 4, 1957.



President's Page



The changing picture of public interest from year to year in disease and public health matters often causes us to become unmindful of some of the diseases that have plagued man since his entrance into the world. Those diseases which have a sudden and spectacular onset seem to command public attention more at the present and bring in greater contributions and service. "Polio" campaigns, with the crippled child, probably have the greatest appeal, with crippled children's clinics, spastic schools, muscular dystrophy and heart disease following in order.

The Southern "TB" Conference held its annual meeting in Birmingham October 2-3-4, with the yearly session of the Alabama Tuberculosis Association on October 3. The problems of disease which are oldest and most constant tend to lose their appeal with time, and this seems especially applicable to tuberculosis. The total number of cases in Alabama on December 31, 1956 was 13,124. There were 2,127 new cases in the year 1956, with 330 deaths. The mortality rate per 10,000 is 1.0 while the morbidity rate per 10,000 is 40.1.

We have a total of 933 sanatorium beds in Alabama, with 590 for whites and 343 for colored. There are also 60 beds in penal institutions and 114 in Veterans Administration Hospitals. In the Sanatoria of the state there are extended waiting lists, as there always will be as long as the incidence of the disease and the ratio of beds remain as they are. In the ten-year period from 1947 to 1957 the number of cases has risen from 8,605 to 13,124. Dr. Gill assures me that there has been so little change in total population in the state that these statistics would be affected hardly any, if at all.

TUBERCULOSIS DEATHS

Year	Number	Rate	Rank
1925	2493	99.4	2
1930	2832	86.1	4
1935	1740	63.4	5
1940	1507	53.1	7
1945	1176	39.6	7
1950	822	26.8	6
1955	349	10.8	9

The year I started practice in Alabama there were 2,493 deaths from tuberculosis, with a rate of 99.4 per 10,000 population, and the disease ranked second in cause of death. In 1955 there were 349 deaths and the disease ranked ninth as a cause of

death.

In the early 1930's I was impressed by a story of tuberculosis in the United States as told by Dr. J. A. Myers, Professor of Internal Medicine and Public Health at the University of Minnesota Medical School at Minneapolis, who spoke at a public meeting sponsored by the Montgomery County Tuberculosis Association. He stated that in 1915 the governments of the United States and Great Britain united in an effort to fight tuberculosis. Their first objective was to eliminate bovine tuberculosis, which seemed to be the source of most human tuberculosis. In this country the process of elimination of tuberculous cattle was carried on with great seriousness and efficiency and by 1930 there were only a few counties in the entire nation where infected cattle could be found. In England there was half-hearted interest and effort in the problem and in 1930 the number of infected cattle was about the same as in 1915.

I have had the impression since hearing the above that, by isolation of active cases and following the contacts, tuberculosis could be eliminated in most any state in 25 years. The success would depend entirely on sufficient money and trained personnel. Our State Medical Association has always pushed this problem before the State Legislature with great vigor and, at the session just ended, it was most gratifying to see the House Chamber at the Capitol filled with laymen and physicians when the tuberculosis bill had a committee hearing.

The physicians are the ones best acquainted with the ravages of this disease, other than the patients themselves. We know of its insidious onset, the morbidity and economic loss and the age group most susceptible. It still remains our responsibility in our daily practice to keep the public aware of this killer which still ranks 12th in cause of death in Alabama. I hope the Southern Conference in Birmingham in October was fruitful and effective.



ORGANIZATION SECTION

PROGRAM OF THE ASSOCIATION

This is the third, and last, in a series which outlines the program of the Association as it was developed at the planning meeting of committees of the Association on August 3 and 4.

BUREAU OF PUBLIC RELATIONS

Dr. J. O. Finney is the Advisory Committee member who coordinates the work of the Bureau of Public Relations. At the meeting in Montgomery, Dr. J. Michaelson, Chairman, Committee on Public Relations; Dr. M. Vaun Adams, Chairman, Committee on Legislation; and Dr. J. P. Mudd, Jr., Chairman, Committee on Veterans Affairs, worked with Dr. Finney in outlining the program of the Bureau. Other members of the Association who contributed to the discussions were Dr. John A. Martin, President, Dr. W. D. Anderson, Vice-President, and Dr. E. L. Strandell, Vice-President.

Following are the committee reports which were presented to the assembly by Dr. Finney, after they had been discussed in the work session:

Committee on Public Relations—Dr. J. Michaelson, Chairman.

"The Committee reports as follows:

"1. Expansion of the Physician Placement Program is recommended. In addition to the original questionnaire now being sent out, individual communities requesting physicians will be investigated by the executive assistant, a division vice-president and/or members of the respective County Medical Societies.

"2. Continuation of the Speakers Bureau is recommended. A brochure has been sent to civic organizations of the state, listing subjects for discussion. Held in the central office is a list of physicians who have signified willingness to participate. It is suggested that each speaker turn in a brief summary of his remarks to the central office and that an effort also be made to obtain information from each civic group relative to how well the address was received by the group.

"3. Abandonment of Medical Forum activities for the present is recommended.

"4. Close liaison between Farm Bureau and Extension Service is recommended; however, it is felt that activities in these fields are primarily the responsibility of the Committee on Rural

Health, and the Committee on Public Relations wishes to serve chiefly by aiding the Committee on Rural Health in matters pertaining to the Farm Bureau and Extension Service.

"5. It is recommended that a group be established to be composed of representatives from the Medical Association of the State of Alabama, Alabama Dental Association, Alabama Bar Association and the Alabama Pharmaceutical Association, such group to meet and discuss related problems and intergroup public relations. The observation is made that the Pharmaceutical Association and Bar Association appear pleased to have had a fraternal delegate from the Medical Association of the State of Alabama at their last annual meetings.

"6. It is recommended that representatives from allied and non-allied professional groups be invited to attend at least one annual meeting of the Committee on Public Health. (Dr. D. G. Gill was present at the Sunday assembly and stated that representatives from these groups had attended one meeting of the State Committee on Public Health; that they had not been invited to attend meetings in the recent past because the agenda had been filled with routine matters which he did not think would be of interest to them; but that he contemplated asking them to attend some future meetings.)

"7. Shortly, TV programs consisting of one-minute spot films will be initiated. A similar spot program plan is being developed for use by radio stations, and a method of systematic press releases will be activated soon.

"8. It is recommended that the President of the Association send a letter of commendation to the Director of the Department of Public Safety for his efforts in promoting public safety on the highways, and, further, that the President offer the services of the Committee on Public Relations to the Director of the Department of Public Safety.

"9. The Committee requests that all candidates proposed for the William Crawford Gorgas award be forwarded to the central office for review by the Committee and that the Vice-Presidents stimulate the County Medical Societies of their respective districts to submit names of candidates for the award. Instructions pertinent to necessary qualifications of candidates will be issued soon.

"10. The State Fair booth is to be continued as the responsibility of the central office.

"11. It is recommended that certain educational booklets be disseminated to each member of the Association, with an accompanying card by which the member can order additional copies for distribution to his patients, if desired.

"12. On the recommendation of the Woman's Auxiliary, the *PR Notes* will be sent to each member of the Auxiliary for a trial period of one year.

"13. Indoctrination of incoming members at each annual session is to be continued and the recommendation is made that an indoctrination program be held once each year in every County Medical Society having ten or more members.

"14. The Committee urges the central office to encourage County Medical Societies to establish an emergency call system. It is suggested that general practitioners lead in the initiation and operation of this program.

"15. The Committee is interested in the activation of courses for medical assistants. It has been found that the University of Alabama is willing to offer a six to eight hour course on a one-day basis. An effort is now being made to establish such a course in each of the University's centers located in various sections of the state.

"16. The Committee regrets that a program of activity for medical students, interns and residents has not been initiated and that it cannot be initiated this year.

"17. It is recommended that a summary of the activities of this Committee be printed in the organization section of the *Journal* at least once each quarter."

The report was adopted by the assembly.

Committee on Legislation—Dr. M. Vaun Adams, Chairman.

"*Resolved:* That the Medical Association of the State of Alabama, through its Committee on Legislation, offer a positive legislative program, which would be in the best interests of the State Medical Association. It should also offer leadership in the legislative field which affects the public health of the citizens of Alabama;

"That the Committee publish a booklet incorporating the Medical Practice Act, the Public Health Laws of Alabama, and any other laws which affect, directly or indirectly, the Medical Association of the State of Alabama, to be distributed to all doctors and to be given at indoctrination courses;

"That the Committee hold a yearly joint meeting with the legislative contact men from each County Medical Society, so the duties, responsibilities and

obligations of each group may be more clearly defined. This would undoubtedly stimulate interest in the legislative problems confronting the Association;

"That the Committee request an appropriation from the Board of Censors to be used for acquiring legal counsel and guidance in the Association's proposed legislation;

"That this Committee initiate and sponsor appropriate legislation.

"That this Committee publish, under the organization section of the *Journal*, the Legislative Committee reports on the various bills studied, if, in the estimate of the chairman, the executive secretary and the editor of the *Journal*, it would be in the best interest of the Association;

"That this Committee request that a copy of all proposed bills pertaining to medical legislation be referred to this Committee for an evaluation and recommendation before they are introduced into the Legislature. If this can be accomplished, it will be of inestimable value to all concerned, particularly to the Medical Association and the sponsors of the proposed bills."

The resolution was adopted, as was also the Three Point Program which follows:

"Three Point Program—

I. Canvass candidates for Governor, Lt. Governor, and Legislature concerning health matters.

A. Background:

1. In the past the State Medical Association has waited until Legislators were elected before learning their feelings on health matters.
2. This is too late to serve as a guide to the profession when deciding how to vote.

B. Method:

1. Devise a questionnaire of 5 to 10 questions.
 - a. These should cover the various phases of the Association's legislative program.
2. Seek the assistance of each County Medical Society.
 - a. This will very likely necessitate a visit to each Society by the Division Vice-President and/or the Executive Secretary.
 - b. At least one M. D. should talk with each candidate and get his answer to the questions on the questionnaire.
3. Inform the profession of the answers given to questionnaire.
 - a. The central office will make enough copies of the answers from each candidate to supply one to each M. D. concerned.

C. Advantages:

1. The profession will have vital information prior to elections.

2. The Association will have longer to work in weak areas than has been possible before.
- II. Prepare a program of legislation for the Association.
- A. Background:
1. In the past the Association's program has been criticized as being a negative approach.
 - a. This is not entirely agreed with; for to be against something, one must of necessity be for something else, or vice versa.
 2. It seems more appropriate to say that the Association's program has not been properly defined, nor has it been developed far enough in advance of each session of the Legislature.
- B. Method:
1. Committee prepare recommendations on the various phases to be covered.
 2. Recommendations be presented to Association for approval in April 1958.
 - a. These must be a part of the Committee's report to the Association which will allow study by the voting members and the County Medical Societies prior to the annual session.
 3. After approval, get bills drawn to cover features set forth by proposals.
- C. Advantages:
1. The Association would have a coordinated program.
 2. The work would be done early enough to allow time to prepare the bills as they should be.
- III. Present Association's program to the Legislators:
- A. Background:
1. The chief trouble in the past has lain in timing.
 - a. The Association's wishes were not known far enough in advance to do any work prior to the session.
 - b. After coming to Montgomery the Legislators are so busy and subjected to so many pressures and counter-pressures that it is well nigh impossible to get a program accepted after the session begins.
- B. Method:
1. Beginning September 1958 set up a series of meetings around the state between Legislators and M. D.'s.
 - a. Purpose of these is to discuss the Association's program, answer questions that may arise, and attempt to get support of the Legislators for the program.
 - b. It is highly probable that these meetings will have to be by regions, perhaps senatorial districts.

- c. Decisions on where, when, and who, as well as type of meeting, can be made later.

C. Advantages:

1. The Legislators will not come to Montgomery ignorant of the Association's program.
2. "Home folks" (constituents) will have expressed their desires.
3. After the session begins, Legislators can spend time on pushing for programs instead of trying to learn what is desired.
4. The only place a program can be sold is back home before the session; this will have been accomplished."

When the Committee report was presented to the assembled group, the question was asked: "Is the Committee authorized to act as a representative of the Medical Association of the State of Alabama or must it only advise?" Dr. Martin summarized the ensuing discussion by stating that the Committee on Legislation should have as much authority to act in legislative matters as the Board of Censors has in other matters. The question of empowering the Committee to act will be discussed at a meeting of the Board.

Committee on Veterans Affairs—Dr. J. P. Mudd, Jr., Chairman.

Dr. Finney stated that the committee did not wish to report; that there were many facets of the program, some involving legislation; that the committee needed more time to make a report.

* * *

The President comments.

In his closing remarks, Dr. Martin recommended that the reports given at the planning meeting be published in the *State Journal* and that they be read at County Medical Society meetings. He commented on the fact that he had never heard the A. M. A. delegates instructed from the floor and that he believed some thought should be given to the matter. He stated: "We have more of a political future than ever before," suggesting that at some future date the Association write to the state's representatives in Washington once each month and that probably the letters should be published in the *State Journal*.

Dr. Martin ended his remarks by reiterating a statement made earlier: "Everything in the State Association should start at the county level."

* * *

The program of the Association has been outlined in its entirety. Members are urged to familiarize themselves with the plans of the three bureaus in order that they may be in position to fulfill their responsibilities to the group.



ASSOCIATION FORUM

THE DOCTOR'S ROLE IN CHILD ADOPTION

Contributed by

Judith Gresham, Director
Bureau of Child Welfare

Alabama State Department of Pensions and Security

The very term adoption rouses interest in the press, radio, television, and in any conversation. This widespread interest reflects a drastic change in attitude during the past several decades. For the most part, this change is for the good. To be an adopted child is usually to be accepted and approved, whereas, a few years ago an adopted child was more likely to be pitied or expected to be everlastingly grateful for his good fortune.

Today, national agencies, such as the Child Welfare League of America and the U. S. Children's Bureau, are conducting extensive research into the practices prevailing in adoption. We all know that there is a three-fold import in every adoption: the child, his natural parents, and his adoptive parents. Safeguards which protect one likewise protect the other two. If the interests of one are ignored, the interests of the others are in jeopardy.

The three professions most vitally concerned in adoption are the social work profession, the medical profession, and the legal profession. The role of each profession is of major importance. Only as each of the professions recognizes and respects the role of the other, and only as the three professions can move out as a team, will adoption safeguards be insured. In this discussion focus will be on the role of the medical profession in adoption.

The State Medical Association at its annual session in 1955 recognized the role of the doctor in adoption and passed a resolution with reference to the positive contribution of the physician in adoption and frowning down upon the physician who departs from that role and attempts to assume the responsibility of another profession. This resolution, adopted by the 1955 session of the Association, is of such importance that it is quoted in full as follows:

"WHEREAS, The adoption of children into unrelated homes is of continuing and increasing interest to prospective foster parents, to the public generally, and to

the Medical Association of the State of Alabama; and

"WHEREAS, Alabama law since 1931 established legal procedures for adoption so as to safeguard the children as well as the natural and foster parents; and

"WHEREAS, Recognition must be given to the fact that physicians occupy, in many instances, strategic positions when children are in danger of being deprived of parental care and support by virtue of the fact that (1) the natural mother may have made the initial contact with the physician in her time of stress and discouragement; and (2) the physician may have delivered the child; and (3) persons desiring to adopt a child may have made the original contact with their physician; and

"WHEREAS, It is recognized that the state law makes specific provision for authorized agencies staffed by social workers to render service to natural parents, to children in danger of being deprived of parental care and support, and to prospective foster parents; and

"WHEREAS, As important as the role of the physician is, his profession does not equip him to replace the role of the social worker, therefore be it

"Resolved, That the Medical Association of the State of Alabama recommends (1) that all County Medical Societies carefully scrutinize any practice leading to the placement or referral of children for adoption by physicians; and (2) that individual physicians use their influence to acquaint their patients to whom they provide professional service with the procedures of adoption as prescribed by law; and be it further

"Resolved, That a copy of this resolution be mailed to the presidents of all County Medical Societies, to the State Health Officer, to the probate judges in the sixty-seven counties, and to the Commissioner of the State Department of Public Welfare."

Dr. Samuel Karelitz, representing the Academy of Pediatrics, at a conference held in Washington under the auspices of the U. S. Children's Bureau in 1955, had the following to say about the role of the doctor:

"Whether it is in the role of the physician who corroborates the suspected state of pregnancy, renders prenatal and postnatal care, and delivers the baby; whether as the family physician serving in the role of councilor to a distraught mother with an infant whom she cannot support; whether as the doctor being consulted about infertility by childless couples; whether as a member of the medical staff of a hospital, or as a member of a social agency interested in placing children for adoption, the physician is, or should be, an important link in the chain of personnel who participate in the practice of adoption."

In the adoption program of the Alabama Department of Pensions and Security the physician has a major role in decisions with reference to the

adoption placement of individual children. To the medically untrained eye most newborn infants are "ready" to be welcomed into an adoptive home. A recent incident points up the importance of the medically trained eye in adoption placement.

The State Department of Pensions and Security received the custody of an infant with authority to give consent to adoption. In appearance the baby was everything a baby should be. Upon examination by the pediatrician, however, it was discovered that the baby had an enlarged heart which at any time would prove fatal. Upon the advice of the pediatrician, placement plans were not made for this infant. The child died six months after he was received by the State Department.

Likewise, the physician's recognition of symptoms of hydrocephalic conditions has alerted the agency to the fact that these children may be so impaired mentally they will not be able to make use of adoptive homes.

On the other hand, the physician's skilled service has been of immeasurable help in making it possible for some children to achieve adoption in spite of physical disabilities. A premature baby who was born with clubfeet was welcomed into her new adoptive home before she was one year of age. It was through the physician's careful observation and interpretation to the adoption worker that a family was able to feel comfortable about this child's future growth and development. Often, children with thyroid difficulties, defective vision, and orthopedic problems have been spared a long wait and have achieved adoption because of the teamwork of the doctor and the social worker in estimating the possibility of the child's being able to have a happy, full life in spite of his difficulties. Healthy newborn infants frequently come to the agency from families whose medical histories reveal marked pathology. The careful observation of the doctor and consultation between social worker and doctor enable the agency to proceed with more confidence in determining that these children, too, can be chosen as adopted children.

There are physicians all over the state of Alabama, as elsewhere, in a position to have the initial contact with the pregnant mother who is disturbed and distraught because of her inability to care for her expected child. Recently, such a mother went to her family physician asking not only for medical treatment but for his services in finding a home for her unborn child. The particular physician she consulted quickly told her that he would give his medical services free but that he would not participate in the actual separation of the child from his mother. Due to this physician's interpretation, the mother sought the services of the County Department of Pensions and Security.

She had, therefore, not only the benefit of post-natal and prenatal care from the physician but the help and support of the social agency in the separation from her child, thereby providing safeguard and protection to all concerned.

Unfortunately, there are incidents in Alabama where physicians have attempted to assume responsibility far beyond their role as medical men. Recently, a physician whose advice was sought by an unmarried pregnant mother indicated he had patients who were anxious and willing to adopt her unborn child. The physician made all the arrangements, including the transfer of the child to the prospective foster parents. The mother under the pressure of her own anxiety and her physical weakness signed consent to adoption two hours after the baby's birth. Later, this young mother could not live with the fact of separation from her child and through due process of law took steps to regain custody of her baby. While it took time to effect the return of the child to the mother, the courts eventually ordered that the foster parents turn the child over to the natural mother.

Negative incidents of physicians' participating unwisely and beyond their own role in adoption placement serve but to point up the importance of the true role of the physician in adoption. Adoption is not something that can be done by one profession alone. The psychiatrist, the psychologist, the pediatrician, the obstetrician, the attorney, and the agency social worker are needed in consummating adoption. The average individual, the average doctor, lawyer, or social worker serving alone is not qualified to effect the whole cycle of services needed in adoption.

Alabama has a long history of successful authorized adoption service. The physicians have been a contributing force in providing the cycle of service needed to effect sound adoptions.

MEDICARE SUGGESTIONS

Contributed by

C. B. Marshall

Claims Manager

Liberty Mutual Insurance Company

The Liberty Mutual has been handling the payments for medical and surgical care for the MEDICARE program since March 11, 1957. Since that time we have had 4,500 claims reported, or an average of 900 per month. We have been asked to give suggestions or pointers that would be of help to doctors or their secretaries in the reporting of these claims.

The DA 1863 forms are prepared and furnished by the Department of Defense. There are 31 places on the form to be filled in and in only a few items can we process these claims without every item

being completed. At first, four out of five forms had to be returned to the doctors for completion but this has now dropped to a ratio of one out of five.

The original of the form is sent on to the Department of Defense in Washington and if it is not correct nor completed it is returned to the Liberty Mutual Insurance Company.

Many forms on maternity cases are still being received without the signature of the wife in the lower section of item 14. This probably requires the returning of the forms as much as any single item. We still see some forms without any information in item 6 and item 7. If the identification card or authorization card is not available, write in what measures were taken to identify the patient or parent.

Item 18 of the form must be completed. This is intended to give the inclusive dates of treatment and not just the dates the patient is in the hospital, as many have concluded. In maternity cases it is especially important to give the date the patient was first seen and the final date of postpartum care.

We need the delivery date in maternity cases to compute properly the benefits allowable. In a miscarriage case we need the approximate date of conception. Under the maternity section of the plan, drugs prescribed by the doctor can be charged to the doctor and then added to his bill. This has to be itemized in some way, either in an attached bill *in duplicate* or typed on the DA 1863 form. The simplest way is to have the total indicated on the DA 1863 form, with the itemized drug bill attached. We can pay only a licensed physician and therefore cannot pay the druggist directly. Many have thought we could pay drug bills on all claims but this applies only to prescribed drugs on maternity cases.

Anesthesiologists must give the diagnosis in section 20. This is necessary for the coding required before we can send the form on to the Department of Defense.

We find many reports are being received from the principal doctor or surgeon with a notation as to the name and charge for a consultant or assistant surgeon. Each doctor having a charge for services must send in form 1863. We see this more often in the case of an assistant surgeon's charges being added to the surgeon's charges on the surgeon's report. We need two separate reports.

There are 5,000 surgical procedures listed in the surgical schedule. All doctors have been supplied a copy of this schedule and we will be glad to mail additional copies. We ask that the doctors and surgeons use the procedures listed in the schedule when describing the operation performed or treatment given. In the case of a procedure performed which is not listed in the schedule, a special report

will be required which we will forward to the Medicare Committee of the Medical Society for advice. This is then sent to the Office for Dependent's Medical Care in Washington for adjustment.

Item 29 of the form must be completed. Special emphasis is placed on the second set of A's and B's.

Finally, in the case of consultants, the consultant's report must have the signature of the primary attending physician in the lower right hand corner, item 31. This does not apply to assistant surgeons, radiologists and anesthesiologists. The doctor sending in the report must date and sign in the lower left hand corner.

Considering that the number returned is going down daily and checks are going out promptly, we feel this is a good indication that the program is running rather smoothly. It is our sincere desire that this be accomplished.

Blood Sludge Called Cause of Ear Disorders—A New York otolaryngologist believes that "sludging" of the blood, brought on by emotional difficulties, is involved in the development of several ear disorders.

Examination of the eyes' blood vessels has revealed clumps of red blood cells, or sludge, circulating in the blood during acute, chronic, and progressive illness, in old age, after severe burns or injuries, and after emotional upheavals, Dr. Edmund Prince Fowler said.

The sludging seems to be a reaction to strain—either physical as in an injury or illness, or emotional, Dr. Fowler said in the October Archives of Otolaryngology, an American Medical Association publication.

He observed such sludge in various types of sudden and progressive deafness, in Meniere's disease and in otosclerosis.

When blood cells aggregate in clumps, a shortage of oxygen develops in the area. This happens because the clumps clog the blood vessels and prevent the normal flow of blood. In addition, the cells' ability to take up and discharge oxygen is curtailed, since most of their surfaces are smothered. If the oxygen is cut off too long, damage to surrounding cells may result. This may be what happens in ear disorders, Dr. Fowler said.

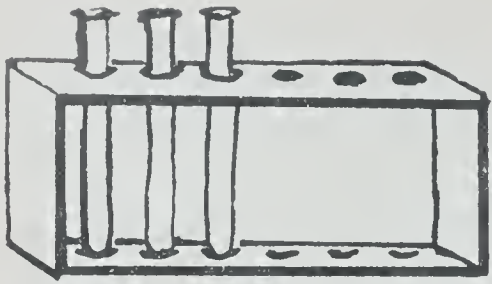
He noted that most patients with otosclerosis who show sludging have histories of unresolved "frustrations," "abuses," "mental and bodily illness," and "emotional hypersensitivity."

Sometimes during the inactive periods of Meniere's disease and otosclerosis, little or no sludge may be seen, but it may be made to reappear or increase by even "apparently trivial emotional repercussions," Dr. Fowler said.

During attacks of head noises or dizziness, sludging of the blood regularly occurs. It is also found after the sudden onset of deafness. This strongly suggests that sudden deafness is caused by an oxygen shortage in the ear's labyrinth due to blocking of the circulation.

Some drugs which stop blood coagulation help prevent sludging in the early stages. However, the first step in reducing sludging—and perhaps preventing ear disorders—is for the patient to adjust to his so-called "emotional instabilities," Dr. Fowler said. The patient must face facts and learn to stop "overwishful thinking" and to adapt to disappointments and frustrations.

"Aggravation causes aggregation," he said.



STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.
State Health Officer

THE HUMAN HEART AND ITS ILLS

What is one of the first rules or lessons a young child is taught by his parents? Think for a moment, and you will be able to answer that the child begins to learn early in life the value of taking care of prized possessions. At first it may be toys that will last longer if the child takes good care of them from the first day he begins to play with them. Then, in later years, the boy or girl and the adult as well realize the difference proper and improper care can mean for an automobile, a piece of silver or some beautiful furniture.

Material possessions, then, often require a great deal of care for long enjoyment and maximum use. But many times, in the event a thing or article outlives its usefulness, it may be possible to replace it.

Many of us know and realize the often inevitable losses suffered when we neglect to give the possessions we have the care they need. But, strangely enough, we somehow and sometimes tend to forget our most valuable possession of all—our bodies. And particularly, some people neglect that essential body organ so necessary to life, without which no human being can survive. That vital organ is the heart, which happens to be the strongest and toughest part of the human body. But to remain strong and tough for the hard work it needs to do daily and all the years of our lives, it needs a chance to use its reserve powers. In short, it needs to be taken care of, much like the prized material possession, only more so, because the heart, unlike the piece of silver or furniture, cannot be replaced.

And yet, the heart does not always get the care it deserves. Howard Blakeslee, author of the Public Affairs Pamphlet by the title of *Know Your Heart*, sums up some cases of heart neglect in this way:

"A lovely women never would dream of mistreating her complexion as she does her heart. Even a baseball pitcher does not punish his throwing arm as many men drive their hearts."

In Alabama and in other parts of the United States and some foreign countries, the story is pretty much the same. The State Health Department's records show that heart disease is Ala-

bama's leading cause of death. Moreover, the number of deaths from this cause appears to be increasing, rather than declining. Not only an increase in population but a larger number of people of advanced age in our society are the explaining reasons for the increase, primarily.

Of course, some of the deaths from heart disease undoubtedly occur as a result of man's greater life span. However, prevention becomes more and more of a realizable goal where heart disease is concerned. More damaged hearts can be mended, and more cases of heart disease can be prevented than at any other time in man's history. Even now, lives are being prolonged because of what doctors can do for victims of this disease, where once the patient might have had no chance at all.

But above and beyond what doctors can do, there is the care each individual can give his own heart. Such care is advisable for everyone, but it is even more important for the person with an already damaged heart, or for an older man or woman.

The best heart care will be based on a knowledge of how this organ works, and the things that can go wrong to prevent it from functioning properly. The Public Affairs Pamphlet author we mentioned earlier is of the opinion that every person would take better care of his heart if he could see what it looks like while it works, at the job that continues without letup, day after day, year after year. Many people, of course, have seen movies of the human heart in actual operation. And a few others, relatively speaking, such as doctors and nurses, have witnessed firsthand this pulsating muscle within the body of many patients.

But many people may not easily have the chance to observe a heart operation, or see a movie of this same thing. Thus, as many must forego this experience that undoubtedly would make quite an impression, there remains the picture which can be drawn through words. In such a case, the imagination must be used, in the absence of real pictures or photographs.

Possibly, the heart—this hard-working muscle that is about the size of a large fist—has been described in many ways through the years. However, it is hard to imagine a word picture much if any clearer than the one outlined in *Know Your Heart*, the Public Affairs Pamphlet mentioned

above. Author Blakeslee asked us to think of the heart as a four-room house, with two rooms upstairs and two on the bottom or ground floor, or what is commonly called a duplex. Next, he asks us to imagine a center wall divider, extending from the roof to the ground, which in effect makes two separate, two-room apartments out of the "heart house."

The "heart house," also, has chimneys, one for each side exclusively, which arise out of the ceilings of the lower floors, with no openings into the upper stories.

Now the heart itself is not shaped like a house. But it does have the separate rooms or compartments and the "chimneys" Mr. Blakeslee has described. In an actual human heart, the upper stories of the "house" are the right auricle and the left auricle. Similarly, the lower rooms are the right ventricle and the left ventricle. And the "chimneys" do not carry smoke, but rather blood. They are the two main arteries coming out of the heart. The one on the left is called the aorta, and the blood coursing within its walls is on its way to all parts of the body, through the various other arteries and capillaries. The artery on the right, meanwhile, holds blood that will be carried to lungs, to pick up needed oxygen from the inhaled air.

In a sense, the lower floor of rooms in Author Blakeslee's "heart house" might be compared with a basement. For all the openings to the body are found on the upper floors. Through the "doors" of the upper right room pours blue blood from the body's veins. There is a trap door from the upper right room to the right compartment, and through this interior passageway, the blood runs down to fill the basement.

Meanwhile, the same or a similar process is taking place on the left side of the "heart house." There is one main difference, however. The red blood which fills first the upper left chamber and then flows down to the bottom compartment comes from the lungs, rather than the veins, as was the case with the right side of the heart.

Once both lower compartments are filled with blood, the whole "heart house" begins to contract or shrink. This shrinking action is greater on the lower floor, and it acts to force the blood up to two trap doors at the bottom of each "chimney" or main artery. From there, the blood is pushed to the top, leaving one artery for the lungs and the other for the body's remaining parts.

While the heart may have seemed almost to "stand still" during the above description, that is far from the case. It is in continuous motion, alternately contracting or shrinking to send the blood on its way, and expanding to allow its com-

partments to refill. But to fulfill the body's needs, even when an individual is at rest or reclining, the heart contracts about 70 times a minute! That happens to be an average of more than once for every second, and think how many more times than this it must contract when the individual is engaged in strenuous physical exercise!

Doctors have a scientific name for the heart muscle; that name is the myocardium. You may recognize this term as the name or part of the title of various heart ailments. At its thickest point, the muscle or the myocardium is approximately one-half an inch in thickness.

Similarly, there are two other scientific names for parts of the heart which are commonly heard these days. The first is endocardium, which is the name given to the heart's inner lining. This lining includes the valves or trap doors which allow the blood to pass from upper to lower compartments on both sides of the heart, and also the valves through which the blood is pumped into the two main arteries which lead from the heart. Thus, the name for a heart condition involving the inner lining and the valves will more than likely take its name, in turn, from endocardium. One example is endocarditis, which is an inflammation of the heart lining. The third technical title for a part of the heart is pericardium. The pericardium is the tissue which forms a wall about the heart, enclosing it, and separating it from surrounding body parts.

Every time the heart contracts, there is a "heart-beat." And figured on the basis of the estimate of 70 contractions per minute for a reclining, or resting individual, the heart of the person who lives to the age of 70, or three score years and 10, beats well over two billion times!

Mr. Blakeslee, who has given us the description of the heart as a house, also gives us an idea of the blood's travel time from the heart to certain parts of the body, and back again to the heart. In the Public Affairs Pamphlet we mentioned earlier, he tells of certain tests to measure the time involved. In one type of experiment, the sweetening agent saccharine was injected into a vein in the arm. And in 12 to 13 seconds, the individual sensed the sweet taste on his tongue. This, then, was a round trip timetable, for in order for the person to taste the saccharine, the venous blood had made a stop in the heart on its way to the lungs, returned to the heart, and was then pumped back into the aorta, and from there made its way to the tongue!

Now, what can go wrong with the heart? Needless to say, the things that can happen to damage this hard-working muscle are more specific than the general term "heart failure," which was used more often in earlier years, or the other general term "heart trouble" which is heard often today.

Fortunately, for all of us, doctors know how to differentiate among various types of heart conditions today. It is this ability to differentiate among and do something specific about the varying heart ills that makes possible actual prevention in some cases, and a great degree of heart mending in others.

While there are some 20-odd different kinds or types of heart diseases, most of these conditions fall into three groups. The first of these three categories is rheumatic heart disease, which by the way is now a reportable disease in Alabama. The second is high blood pressure or what the doctor calls hypertension. And the third is coronary heart disease. Two distinct types of maladies are included in coronary heart disease. The first is hardening and narrowing of the coronary arteries—the vessels which are the heart's sole source of blood supply. The doctor knows this ailment by the name of coronary arteriosclerosis. The second type of coronary heart disease is coronary thrombosis, which is the name given to the formation of a clot in a coronary artery. Such a clot occurs when the walls of the artery become scarred or sclerotic.

There are six other heart conditions that occur quite frequently. There are the heart diseases caused by syphilis, the congenital defects which occur before birth, those conditions caused by overactivity of the thyroid gland, subacute bacterial endocarditis (which is another name for chronic bacterial infection of the heart's inner lining), those heart ills brought on by chronic lung disease, and diphtheria. There are 12 other heart ills, including such conditions as accidents and wounds where the heart is injured directly, and still another known as a "functional" heart disorder, so-called because nothing is physically wrong with the heart mechanism.

Do you remember earlier our mention of the fact that the heart expands after each contraction? This is the heart's own way of relaxing, and at the same time, the explanation for its strength and power throughout the years. But to relax as much as it needs to, the heart requires its owner's help. In other words, the person who "drives" himself many hours each day may not be giving his heart a fair chance.

The advice to "know your heart" is well-taken, as it undoubtedly will promote more nearly the ideal treatment for this organ, this "wonder" muscle of the body.

Although heart and circulatory disorders cause more deaths than all other diseases combined, great progress has been made against certain forms of heart disease, according to Health Information Foundation. Thanks to new methods of fighting rheumatic fever and rheumatic heart disease, for example, the number of heart disease deaths among children 1-14 has decreased by 95 per cent since 1900.

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director

SPECIMENS EXAMINED

July 1957

Examination for diphtheria bacilli and Vincent's	80
Agglutination tests	799
Typhoid cultures (blood, feces and urine)	604
Brucella cultures	13
Examinations for malaria	116
Examinations for intestinal parasites	3,384
Darkfield examinations	1
Serologic tests for syphilis (blood and spinal fluid)	24,306
Examinations for gonococci	1,547
Examinations for tubercle bacilli	4,126
Examinations for Negri bodies (smears & animal inoculations)	193
Water examinations	2,627
Milk and dairy products examinations	4,178
Miscellaneous examinations	385

Total 42,359



BUREAU OF PREVENTABLE DISEASES

W. H. Y. SMITH, M. D., Director

CURRENT MORBIDITY STATISTICS

1957

	June	July	E. E.* July
Typhoid and paratyphoid	1	2	6
Undulant fever	2	1	1
Meningitis	13	19	6
Scarlet fever	418	362	19
Whooping cough	34	21	62
Diphtheria	4	1	9
Tetanus	3	2	4
Tuberculosis	227	176	194
Tularemia	0	1	0
Amebic dysentery	1	1	1
Malaria	0	0	7
Influenza	96	111	25
Smallpox	0	0	0
Measles	1342	446	149
Poliomyelitis	5	5	62
Encephalitis	6	2	0
Chickenpox	46	10	16
Typhus fever	3	2	3
Mumps	68	41	81
Cancer	808	654	405
Pellagra	0	0	2
Pneumonia	171	85	101
Syphilis	136	115	235
Chancroid	5	2	6
Gonorrhea	295	276	464
Rabies—Human cases	0	0	0
Positive animal heads	19	11	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATISTICS
FOR JUNE 1957, AND COMPARATIVE DATA

Live Births, Deaths, Fetal Deaths, Infant Deaths, and Deaths by Cause	Number Registered During June 1957			Rates* (Annual Basis)		
	Total	White	Non- White	1957	1956	1955
Live births.....	6475	3919	2556	23.8	23.2	22.7
Deaths	2151	1354	797	7.9	7.5	7.7
Fetal deaths	165	73	92	24.8	23.8	23.4
Infant deaths—						
under one month.....	130	63	67	20.1	21.0	22.6
under one year.....	172	81	91	26.6	30.3	29.7
Cause of death						
Tuberculosis, 001-019.....	30	12	18	11.0	7.8	9.8
Syphilis, 020, 029.....	5	2	3	1.8	1.5	1.9
Dysentery, 045-048.....	4	1	3	1.5	0.4	1.1
Diphtheria, 055.....	1		1	0.4		
Whooping cough, 056.....					0.4	0.4
Meningoccal infections, 057.....	1		1	0.4	0.4	0.4
Poliomyelitis, 080, 081.....						1.1
Measles, 085.....	1		1	0.4		
Malignant neoplasms, 140-205.....	273	204	69	100.4	105.1	111.5
Diabetes mellitus, 260.....	20	14	6	7.4	9.7	6.4
Pellagra, 281.....	2	2		0.7		
Vascular lesions of central nervous system, 330-334.....	327	202	125	120.2	102.5	88.6
Rheumatic fever, 400-402.....					1.9	
Diseases of the heart, 410-443.....	718	481	237	264.0	248.1	243.7
Hypertension with heart dis- ease, 440-443.....	123	55	68	45.2	47.7	49.2
Diseases of the arteries, 450-456.....	51	34	17	18.8	19.4	14.6
Influenza, 480-483.....	9	6	3	3.3	4.5	1.1
Pneumonia, all forms, 490-493.....	34	17	17	12.5	14.9	13.5
Bronchitis, 500-502.....	2	2		0.7	0.7	0.4
Appendicitis, 550-553.....	1		1	0.4	1.1	0.4
Intestinal obstruction and hernia, 560, 561, 570.....	14	8	6	5.1	4.8	3.8
Gastro-enteritis and colitis, under 2, 571.0, 764.....	10	2	8	3.7	6.0	3.4
Cirrhosis of liver, 581.....	17	12	5	6.2	4.8	3.4
Diseases of pregnancy and childbirth, 640-689.....	4		4	6.0	6.3	9.7
Congenital malformations, 750-759.....	26	20	6	4.0	5.9	7.9
Accidents, total, 800-962.....	159	108	51	58.5	63.7	57.4
Motor vehicle accidents, 810- 835, 960.....	66	47	19	24.3	27.6	27.4
All other defined causes.....	369	199	170	135.7	130.0	140.4
Ill-defined and unknown causes, 780-793, 795.....	73	28	45	26.8	31.7	33.4

*Rates: Birth and death—per 1,000 population; Infant deaths—per 1,000 live births; Fetal deaths—per 1,000 deliveries; Maternal deaths—per 10,000 deliveries; Deaths from specified causes—per 100,000 population.

Liston Named Editor of Today's Health—James Liston, special features editor of Better Homes and Gardens since 1951, has been named chief editor of Today's Health.

Liston assumed his new duties Nov. 15, according to William Hetherington, managing publisher. He is replacing Dr. W. W. Bauer, who has been chief editor of Today's Health since 1949 in addition to being director of the A. M. A. Bureau of Health Education.

Diapers Don't Cause Diaper Rash—In spite of its name, diaper rash is not usually caused by diapers, according to an editorial in the September 21 Journal of the American Medical Association.

Diaper rash is a general term for several types of skin eruptions in the "diaper region," the editorial said.

The commonest cause of a rash is the formation of ammonia by bacteria after urea is broken down. Other eruptions may be prickly heat, thrush, chafing, allergy, and various types of dermatitis.

All of these rashes are aggravated by lack of cleanliness and softening of the skin, which may occur if it remains moist too long. The best preventive for diaper rash is changing the diaper as soon as possible after it becomes wet or soiled. This prevents softening of the skin and the formation of ammonia.

Since plastic or rubber pants increase the likelihood of ammonia formation, their use should be limited to those "brief social occasions when prompt changing would be inconvenient," the editorial said.

Studies have shown that commercial laundering of daipers is much more effective than home laundering in removing and stopping the growth of ammonia-forming bacteria and in removing irritating detergents, the editorial said. The usual commercial process includes three initial warm and hot rinses, two soapings, bleaching, and three rinses in hot water followed by two rinses in chemicals which stop the growth of ammonia-forming bacteria.

Although commercial laundering is not essential to the prevention of diaper rash, the more a home laundering procedure is like that of commercial laundries, the better the protection, the editorial said.

Treatment of diaper rash varies according to the cause, but in any case, the diaper region should be kept dry and warm.

Preventive measures must be continued as long as diapers are worn, the editorial concluded.

Elderly People Need to Reduce Food Intake—Most aging persons do not need to alter their normal eating habits, except to decrease the amount they eat, a New York physician said recently.

Basically the nutritional requirements for the aged are the same as for younger adults. However, older persons need fewer calories to maintain their normal weight, Dr. Herbert Pollack said in the September 21 Journal of the American Medical Association. The article is one of a series prepared under the auspices of the A. M. A.'s committee on aging.

Dr. Pollack, associate professor of clinical medicine, New York University Postgraduate School of Medicine, said the "obesity of the elderly is not due to gourmandizing," but to eating the same amount of food they did in their younger years when their bodies needed more food.

The body needs a decreasing amount of oxygen as it ages. When this is coupled with a decreased over-all physical activity, it means that the body needs fewer calories to maintain the same weight.

Many religious rituals and certain food practices among groups of people indicate that they have long recognized the place of periodic fasting and limited diets in the prevention of overeating. Now scientific knowledge of nutrition and diet makes it possible to develop diets that are rich in the necessary nutrients but do not lead to overweight, Dr. Pollack pointed out.

AMERICAN MEDICAL ASSOCIATION NEWS

ASEPTIC MENINGITIS OUTBREAK STUDIED IN MINNESOTA

A recent Minnesota study has given further proof that viruses other than the three known types of polio virus may cause illnesses that resemble nonparalytic polio.

An epidemic of aseptic meningitis occurred in Minnesota in 1956. It was reported in the August 31 Journal of the American Medical Association.

Laboratory study showed the outbreak to have been caused by Coxsackie B5 virus. This is apparently the first outbreak caused by only one type of Coxsackie virus; in all other reported outbreaks, several types were involved.

Superficially it is impossible to distinguish aseptic meningitis from nonparalytic polio. However, the development of new laboratory tests has made it possible to diagnose the diseases correctly by identifying their causative agents.

In the Minnesota outbreak, Coxsackie B5 viruses were isolated from 61 patients, none of whom had any polio viruses. The B5 type of Coxsackie virus may now be added to a number of other Coxsackie and ECHO viruses which are known to cause illness clinically indistinguishable from nonparalytic polio, the researchers said.

The 61 cases of aseptic meningitis occurred between July and December, the normal polio season in Minnesota. They were among 179 cases originally reported as "epidemic poliomyelitis" to the state board of health. In 66 of these 179 cases there was paralysis of one or both limbs and in 47 cases polio viruses were recovered.

All of the aseptic meningitis cases caused by Coxsackie B5 occurred in rural areas in which there were no cases of paralytic polio.

The illness in patients with Coxsackie B5 virus was characterized by sudden fever with severe headache, stiff neck, stiff back, or leg pains. Many patients also had gastrointestinal symptoms. None had any weakness or paralysis of limbs.

The fact that no polio viruses were isolated from any of the patients gave added proof that their illnesses were actually caused by B5 Coxsackie virus.

The authors are from the department of bacteriology and immunology, University of Minnesota Medical School, and the division of medical laboratories, Minnesota State Board of Health, Minneapolis. They are Drs. Jerome T. Syverton, Donald M. McLean, M. Martins da Silva, and Herman Kleinman, and Hanna B. Doany, M. S., Marion Cooney, M. S., and Henry Bauer, Ph. D.

STUDY ON MONGOLISM, LEUKEMIA REPORTED

Two Minneapolis researchers have suggested that leukemia and Mongolism may have a "common denominator."

A nationwide study has shown that the simultaneous occurrence of leukemia and Mongolism is much more frequent than can be explained by chance alone, they said. In fact, during a four-year period, the actual occurrence of these two unusual diseases was approximately three times greater than that which might have been expected by chance.

Writing in the September Journal of Diseases of Children, an American Medical Association publication, Drs. William Krivit and Robert A. Good asked all doctors to report any simultaneous cases of the two diseases seen in small children during 1956 and 1957.

Leukemia is a serious blood disease in which there is an excess of white cells. Mongolism is an extreme form of mental deficiency marked by such physical characteristics as a flattened skull and slanted eyes. The cause of both diseases is unknown. Mongolism is thought to result from a physical, chemical, or infectious stress placed on the developing fetus between the sixth and ninth weeks of life. A similar cause has been suggested for leukemia, which has also been thought to be a type of virus infection or cancer.

The survey, which was prompted by scattered reports of the diseases occurring together, showed that in the years 1952-55 at least 34 cases of simultaneous leukemia and Mongolism occurred in American children four years and younger. The maximum number of cases to be expected by chance alone was 12.3 for the four-year period for all American children four years and younger, the doctors said.

The likelihood of 34 cases occurring by chance during four years would be less than once in 1,000 times, they said.

Of perhaps greater significance are the six cases of leukemia-Mongolism reported during the first half of 1956, they said. This is almost half of the theoretical total of 12.3 cases expected to occur in any four years.

If similar figures were found for 1956-57, the findings of this study would be even more convincing, the authors said. For this reason, they asked physicians to report all such cases to them.

Drs. Krivit and Good are associated with the Variety Club Heart Hospital, University of Minnesota.

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HYPNOSIS IN ANESTHESIA

MARTIN N. ANDERSON, M. D.

Birmingham, Alabama

Few therapies in the history of medicine have enjoyed simultaneously such widespread acclaim and such universal condemnation as has hypnosis. To some extent these opposite attitudes still prevail. However, recent years have witnessed advances in experimental and therapeutic hypnosis which have tended to establish it firmly as a scientific treatment method.

To most people the word "hypnotism" conveys a suggestion of the supernatural. It is tinged with occultism, shading towards the mysterious and the mystical. The mental image of a "hypnotist" brings visions of the fictional Svengali or the real-life Rasputin;—tall, dark, gaunt and sinister, with glittering, piercing eye.

Hypnosis is one of the oldest of the medical arts. Modern hypnotism was practiced by the ancients, who were convinced of the divine nature of the trance. The Persian Magi and Hindu fakirs, inducing in themselves cataleptic states by strained fixation of the eyes, claimed supernormal powers of healing. The Egyptian "temple sleep" was probably a form of hypnosis during which curative utterances were suggested to the sufferer by the Priest. These temples became so popular that they spread throughout Greece and Asia Minor. With the development of Christianity, trance states were considered forms of witchcraft, and trance healing, if employed at all, was practiced secretly out of fear of ecclesiastic reprisal. It was not until the end of the eighteenth century that the phenomenon of hypnosis was recognized openly as a therapeutic agent.

In 1776, Franz Anton Mesmer wrote a thesis in which he discussed the influence of the planets on the human body. In this paper, Mesmer postulated that this action occurred through the instrumentality of a universal fluid, a kind of impalpable invisible gas in which all bodies were immersed. The fluid had properties like those of a magnet and could be withdrawn by the human will from one

point to another by mere concentration. An in-harmonious distribution of these fluids produced disease. Health could be attained by establishing harmony of the magnetic fluids. The substance, which Mesmer called "animal magnetism," was said to flow from the hands of the operator directly into the patient. Animal magnetism could also be transferred to an animal or inanimate object which thereafter possessed mesmeric powers. Mesmer was forced by the hostile attitude of the medical profession to leave Vienna and to take up residence in Paris where he founded a clinic for the treatment of various diseases. Mesmerism became a fashionable fad, and throngs of wealthy followers filled his apartments to receive the magical nostrum.

Many charlatans followed Mesmer and all sorts of "cures" were available "for a price."

Following the discreditment of Mesmer by the medical profession, few reputable physicians practiced mesmerism until the middle of the nineteenth century when James Braid, a Manchester surgeon, experimenting with the phenomenon, decided that it was not all due to "animal magnetism" or to any other mysterious influence that passed from the subject to the patient. On the contrary, he contended that the mesmeric effect was entirely subjective, and began to publish papers on the subject, along with several others. Braid renamed the phenomenon "Hypnosis," and stated that through the aid of hypnotism important physical and psychological effects might be attained.

About 1846, James Esdaile, in India, reported to the Medical Board seventy-five operations performed under hypnosis, but his letter was never even acknowledged. When he had accumulated over one hundred hypnotic operations, he placed his results before the government. A committee was appointed by it and reported favorably on his experiments. Esdaile continued his work, and before he left India he had thousands of minor

operations and three hundred major procedures done under the influence of hypnosis.

Meanwhile, hypnotism continued in disfavor among psychiatrists and psychotherapists generally, although outstanding developmental work was performed by such courageous scientists as M. H. Erickson and his associates and students at Worcester State Hospital and later at Wayne County General Hospital at Eloise, Michigan. Extensive experiments were conducted at both these institutions and at the Medical School of Wayne University, where the application of hypnosis to psychotherapy was taught by Erickson to his classes in psychiatry. Although not published in book form, papers written by him for technical journals exceed in volume those of any other research worker and have contributed greatly to our knowledge of hypnotism, particularly as to advanced technique. Erickson's and other reports have made psychiatrists aware of the potential value of hypnotism, and many service psychiatrists (including some of Erickson's students) during World War II turned to its use as a short-cut to psychotherapy. Numerous popular magazine articles recited their results, bringing a better picture of hypnosis to many readers.

In 1939 the Menninger Clinic (psychiatric) at Topeka, Kansas, became interested in hypnotism. As a result, medical foundations granted the clinic funds now being devoted to extensive study of hypnotism in its application to functional cases. Reports of the excellent results have been published.

Today, many patients ask their physicians if it is advisable to seek hypnotic aid for the treatment of nervous and mental conditions. The physicians also have read some of the popular or technical articles and many are now willing to and do recommend it. The practice of the writers comes entirely from medical men who prescribe hypnotherapy for patients suffering from functional ailments.

The first attempts to perform surgery while the patient was under hypnosis were made in France, by Dupotet and Recamier, in 1821. Jules Cloquet, in 1829, removed a breast while the patient was in a mesmeric sleep. By 1837 John Elliottson had established an enviable reputation as one of the ablest surgeons in London. He performed many operations with the patients under hypnosis, but he was finally asked to resign his post because of alleged charlatanism.

Although in the past 10 years new interest in the use of hypnosis has become evident, anesthesiologists as a rule are still more comfortable when they use drugs than when they employ the less familiar psychological techniques. However, if physicians understood more clearly what hypnosis is and

what can be expected of it, I believe that it would be utilized much more widely and effectively. It is the only means of anesthesia that carries no danger for the patient. Hypnotism raises the patient's threshold to pain. Actually, perfect anesthesia should be attained by employing hypnotism in conjunction with chemical agents. Hypnosis can be a pleasant experience, involving no tension or apprehension. It can be maintained for long periods and terminated at will, and it has the superlative advantage of placing no extra load on the circulatory, respiratory, hepatic, or renal systems.

The early practitioners of hypnotism were mostly physicians, and much of our knowledge was derived from their study and experiences. Invariably those who became proficient in the practical application of the science were converted into its ardent devotees, even if they were thereby discredited, as sometimes happened. Others, like Freud, never gained a comprehensive understanding of the methodology of hypnosis and gave it up after failing to obtain results which could have been theirs with more knowledge of the subject. Freud himself admitted in 1919 that if psychotherapy were ever to become widely available to the public, a return to hypnotism as a short-cut would be necessary, thereby proving to be an excellent prophet.

Hypnosis is a valuable method of inducing anesthesia or achieving basal anesthesia in children. A simple suggestive technique can induce anesthesia before tonsillectomy, for example, and enable one to make posthypnotic suggestions that render recovery from anesthesia more pleasant. The results in such cases are gratifying, because on recovery the children are more cheerful, more alert, more responsive, more comfortable, and more cooperative than those who undergo anesthesia induced by chemical agents alone.

Hypnosis is invaluable not only as a means of sedation before and after operation but as an auxiliary method of anesthesia or a means of achieving total anesthesia. Hypnoanalgesia is especially useful when employed in conjunction with other anesthetic procedures, because it reduces the amount of chemical agents used. I have used hypnoanalgesia successfully in association with epidural and spinal anesthesia when it was essential to obviate depression of the respiratory or the cardiac system with drugs. Hypnosis alone can be employed in such procedures as incision and drainage, short orthopedic operations, or extractions of teeth. It should be mentioned that hypnodontia is a well-recognized and highly useful field of dentistry.

THEORIES OF HYPNOSIS

Since the time of James Braid, who demonstrated conclusively that hypnosis was purely a subjective experience, there have been three main lines of inquiry into the nature of hypnosis—pathologic, physiologic and psychologic.

Physiologic theories contend that the process of hypnosis is accompanied by a physical change within the cerebral cortex. Bennet, for instance, advanced the idea that there was a suspension of activity in the white substance of the cerebral lobes with an overactivity of the remaining substance of the brain. Heidenhain speculated that the trance resulted from an inhibition of one set of mental functions and an acceleration of another. Sidis believed hypnosis to be due to a functional dissociation between the nerve cells. Ernest Hart suggested cerebral anemia as a cause of hypnosis. Other evidence that hypnosis is a physiologic phenomenon is usually pointed out because of the similarity of hypnosis to animal hypnosis; to sleep; to dissociative states, and to conditioned reflexes. It is known that birds, frogs, alligators, crayfish, rabbits, guinea pigs and some insects enter a state resembling hypnosis when subjected to certain stimuli. For example, alligators, frogs and toads, when turned over on their backs and stroked rhythmically on their undersides, lose their muscle tone and become unconscious. Other animals, when placed in strange or unaccustomed positions, develop catalepsy.

In many animals, these trancelike conditions are produced by fear and appear to be a defense mechanism of simulated death, which serves a defensive purpose.

Hypnosis as a state of sleep:

A common theory of hypnosis purports it to be a modified type of sleep. Pavlov insisted that hypnosis and sleep were identical in that they both were dependent upon areas of inhibition spreading over the cerebral hemispheres. Rabinovitch, subscribing to the ideas of Pavlov, believed that eye fixation during hypnotic induction exhausted and finally inhibited a specific area in the cortex. Absence of disturbing stimuli encouraged the spread of inhibitions over adjacent areas until hypnosis ensued. Kubie and Margolin have elaborated on this mechanism. They believe that the basic physiologic prerequisite for hypnotic induction is the creation of a focus of central excitation with surrounding areas of inhibition. This condition is assured by immobilization and by a monotonous stimulus of low intensity. Fixation of the eyes on a single spot immobilizes the individual. A reduction of excitation occurs in the segmental oculomotor apparatus, the suprasegmental levels, and in the entire sensorimotor system that adjusts

the person to exploratory activities of the eye. At the same time, sensory stimuli are decreased and those that remain are monotonously repeated. Repetition of rhythmic stimuli induces relaxation.

Hypnosis as a dissociative process:

The theory of dissociation was, for many years, regarded as the key to hypnosis. Depth of hypnosis was presumably related to the degree of dissociation. Both hysteria and hypnotic susceptibility were considered dependent upon an aptitude to dissociate. In hypnosis, it was believed, the various functions governed by the brain were, by suggestion, split off from each other. Janet, Prince, Burnett and Sidis were the main supporters of this theory and postulated that intellectual processes could function simultaneously and independently.

Hypnosis as a condition response:

The fact that a more verbal stimulus can, during hypnosis, induce changes of an organic nature, has directed attention to the possibility that hypnotic phenomena are types of conditioned reflexes. In 1922, Cason, utilizing the technic of Pavlov, was able to condition the constriction and dilatation of the pupil of the eye to the ringing of a bell. This work was continued by Hudgins, who conditioned pupillary contraction to the sound of a bell and later permitted the subject to operate the bell and the light circuit himself while muttering the word "contract." The word "contract" after some time produced a reaction of the pupil. Menzies reported conditioned peripheral vascular constriction and dilatation to verbal stimuli. For example, when some subjects spoke or even thought of the word "cold" or "snow," the blood vessels constricted. On the other hand, thinking of words with warm or hot connotations produced a vasodilatation.

While the conditioned reflex theory is an intensely interesting one, and while it is undoubtedly accountable for physical, and even for some certain complex physiologic reactions during hypnosis, it does not seem to explain many important and complex phenomena of the hypnotic state.

Hypnosis as a form of suggestibility:

Most authorities feel that hypnosis is a state of exaggerated suggestibility. Hull asserts that all phenomena seen in hypnosis can be induced to a lesser degree by suggestion in the waking state. Increased suggestibility expresses itself both as ideomotor action, in that an idea tends to induce automatic behavior, and as a response to social stimuli, particularly to a prestige relationship. The average individual is relatively more susceptible to suggestions uttered by a person who is impressive in terms of strength, stature, clothes, gestures, eloquence, age, education, experience and "magnetic personality." There is considerable

evidence that the powers of the hypnotist are based to a large degree upon the mantle of prestige with which the subject cloaks the hypnotist. Some investigators claim that the successful practice of suggestive hypnosis is dependent upon establishing and maintaining an atmosphere of faith in the hypnotist. Anything that lowers the intensity of faith decreases the strength of suggestion. Where the subject doubts the skill and power of the hypnotist, there develops a powerful deterrent to hypnosis. Where he accepts on faith the strength of the hypnotist, he will respond to suggestion for which there is no logical ground. Other theories include psychoanalytic and psychosomatic phenomena, but suggestibility remains foremost as the basis for hypnosis. But regardless of theories, hypnosis remains today as a powerful auxiliary aid to medicine. Therapeutic hypnosis is closely allied to psychiatry and the hypnotist must, of necessity, be a good psychiatrist as well as psychologist. It is difficult and tedious work. Patience is required and a deep insight to the problems of each individual must always be present. Hypnosis is time consuming. Many individuals take hours and even weeks before "rapport" may be consummated between hypnotist and patient. But much can be accomplished for many patients who otherwise continue throughout life with unsolved problems, imaginary pains, psychotic tendencies, misfits, social outcasts, alcoholics, sexual perverts, drug addicts, and others too numerous to mention. Hypnosis is being advanced slowly but surely throughout the world and is being sponsored by many medical organizations. It must be removed from the hands of the "quacks and fakes" and maintained on a high medical therapeutic basis.

We have in our experience performed numerous minor cases of surgery under hypnosis, including simple reduction of fractures, incision and drainage, laryngoscopy, cystoscopy, and minor gynecological procedures such as D&C and conization of cervix. Major procedures include abdominal exploration, cesarean section and exploration of common duct, outlined by the following case history:

REPORT OF THE CASE

The patient was a 71-year-old male, acutely ill, with apparent upper abdominal disease provisionally diagnosed as carcinoma of the head of the pancreas, or obstructed cholecystitis. He had been ill for the past year with intermittent attacks of jaundice and upper abdominal pain. On admission he was acutely ill, extremely jaundiced and apparently in severe pain. His physical characteristics included advanced pulmonary emphysema and intractable asthma. His laboratory findings revealed:

Icteric index	34 units
Prothrombin	48%
Albumin	1+
NPN	76
PSP	10% 2 hrs.
Hemoglobin	14 grams
RBC	4,600,000
WBC	16,450
Cardiogram	HCVD w/ evidence of severe myocardial damage

He was seen by an internist and pulmonary physiologist regarding the possibilities of surgical intervention with the normal methods of anesthesia, and both agreed that due to cardiovascular-pulmonary disease he probably would not tolerate any form of anesthetic—particularly an inhalation-type of anesthetic—due to advanced pulmonary fibrosis and emphysema. This was explained to the patient and hypnosis suggested as an alternative. He was quite cooperative and readily agreed to attempt this procedure.

For a period of approximately two weeks the patient was seen daily. Hypnosis was induced and he responded very favorably. It was possible to place him in a deep "hypnotic trance" and suggestions were carried out very easily. With each visit, attempt at lower levels of hypnosis were made and were successful. Periodic "rehearsals" were done by transporting the patient to the operating suite, placing him on the table, going through the induction phase of hypnosis, and performing a mock operation.

On the day of scheduled surgery he was taken to the operating room. Hypnosis was induced. Patient was draped and the surgery begun. He maintained a level of hypnosis all through the incision of the skin, fascia and muscles, down to the opening of the peritoneum; and, by further hypnotic technique, the peritoneum was relaxed and the abdominal cavity entered. Exploration revealed a common duct stone and no carcinoma.

During abdominal exploration, due to vagal and sympathetic reflexes, the patient partially broke his hypnotic trance, necessitating the administration of a 2% solution of Pentothal, and all that was necessary to be given was 5 cc., during which time he was returned to the hypnotic state by further methods of induction and maintenance, and the operation proceeded uninterrupted. A large stone the size of a grape was removed from the common duct. The abdomen was closed and the patient returned to his room in good condition.

Posthypnotic suggestions were given that the postoperative course would be smooth and uneventful and without pain, and during the remainder of the hospital stay the patient did not take any narcotics for pain and had no complications whatsoever. He left the hospital on the

eighth postoperative day. His jaundice was almost completely gone, his appetite was good, he had begun to put on weight, and the whole procedure was considered an unusual triumph.

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CLINICAL DIAGNOSIS OF RHEUMATIC FEVER

MILTON S. SASLAW, M. D.

Miami, Florida

The diagnosis of rheumatic fever rests finally on the acumen and judgment of the physician. Though clear-cut cases present no problem, many times the disease picture is not typical, and the doctor must call upon many clinical and laboratory aids before he can evaluate the illness properly.

Some symptoms and signs have been considered more significant than others, as part of the total syndrome of rheumatic fever. Kaiser,¹ in 1934, recognized such a distinction, and tabulated the frequency of major and minor manifestations in 1200 cases of rheumatic fever. His concepts and his divisions have remained—they have been modified and embellished, but have not been altered markedly.

In 1944, T. Duckett Jones² presented criteria to assist in the diagnosis of rheumatic fever. He cautioned against the use of such criteria without careful evaluation of each patient individually, before establishing finally the nature of a probable rheumatic illness. These criteria have been modified recently by a committee of the American Heart Association.³ Again, the physician is cautioned to use the modified Jones' criteria as an aid to diagnosis and not as a rigid pattern to which a disease syndrome must adhere.

Presented at the Institute on Rheumatic Fever, sponsored by the Alabama Heart Association, Birmingham, Alabama, March 31, 1957.

From the Department of Medical Research, National Children's Cardiac Hospital, and Department of Microbiology, University of Miami.

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According to this revision (Table 1), a positive diagnosis of rheumatic fever can be made when

TABLE 1 GUIDE TO THE DIAGNOSIS OF RHEUMATIC FEVER, ACCORDING TO THE MODIFIED JONES' CRITERIA ³			
DIAGNOSIS			
Positive		Suspicious	
1. Positive past history of rheumatic fever		1. One major and one minor manifestation	
2. Definite rheumatic heart disease		2. Two minor manifestations	
3. Two or more major manifestations			
4. At least one major and two minor manifestations			
MANIFESTATIONS			
Major			
1. Carditis—must have cardiac enlargement, significant murmurs, pericarditis or congestive heart failure			
2. Migrating polyarthrititis			
3. Chorea			
4. Subcutaneous nodules			
5. Erythema marginatum			
Minor			
Clinical		Laboratory	
1. Fever		1. P-R prolongation on ECG	
2. Arthralgia		2. Leucocytosis	
3. Previous rheumatic fever		3. Increased sedimentation rate	
4. Rheumatic heart disease		4. C-reactive protein present	
		5. Preceding infection with Group A streptococcus	
		(a) Bacteriologic proof	
		(b) Antibody response (e. g., antistreptolysin-O elevation)	
SUGGESTIVE SIGNS AND SYMPTOMS			
A. Systemic		B. Local	
1. Loss of weight		1. Epistaxis	
2. Easy fatigability		2. Erythema nodosum	
3. Tachycardia during sleep		3. Precordial pain	
4. Malaise		4. Abdominal pain	
5. Sweating, pallor		5. Headache	
6. Anemia		6. Vomiting	
C. Family History of Rheumatic Fever			

there has been a definite previous attack, in the presence of rheumatic heart disease, where 2 or more major manifestations are present, or in the presence of at least 1 major and 2 minor manifestations. There is no implication that any of these 4 criteria establishes the diagnosis of acute rheumatic fever. As we shall see later, major and minor manifestations may be mimicked by other syndromes. Furthermore, a past history of rheumatic fever or the present finding of rheumatic heart disease does not indicate that a present acute illness is due necessarily to rheumatic fever. The presence of 1 of these 4 criteria makes it possible for the physician to establish a positive diagnosis of rheumatic fever provided all other illnesses have been ruled out, and provided he is convinced that the pattern of the present sickness may be explained on a rheumatic basis. In the absence of all of these criteria, a *positive* diagnosis of rheumatic fever can not be made.

The physician thus may not be in a position to make a definite diagnosis, but he may suspect rheumatic disease in the presence of 1 major and 1 minor or 2 minor manifestations.

The diagnosis of rheumatic fever is not to be made simply because the doctor does not know what else to call a particular illness. If the disease is so questionable, then, in all likelihood, it will be very mild. The patient will live a far better life if an error is made in which a very mild rheumatic state is not labelled rheumatic fever, than if a patient is labelled rheumatic, when in fact the disease is mild and nonrheumatic.

MAJOR MANIFESTATIONS

Let us now examine the present listings of rheumatic manifestations. The major manifestations are very similar to those described by Kaiser¹ in 1934. Evidence required for significant cardiac involvement is definite, and does not depend on PR, QTc, or other electrocardiographic abnormalities. Cardiac murmurs must be significant. A soft blowing systolic apical or pulmonic murmur is common and accidental. Rheumatic murmurs generally are characterized by loudness, diastolic timing, or changing nature.

Migratory polyarthritis characteristically involves one joint with heat, redness, pain and swell-

ing, and moves from one joint to another. Not all episodes are characteristic, however, and variations in the form of arthritis are common.

Subcutaneous nodules and erythema marginatum are helpful when present. Unfortunately, neither sign is observed very frequently.

CHOREA

Chorea is considered a major manifestation of rheumatic fever. The chief arguments in favor of

TABLE 2
REASONS FOR AND AGAINST CONSIDERING CHOREA
AS A MAJOR MANIFESTATION OF RHEUMATIC FEVER
FOR

1. Chorea and rheumatic heart disease occur in the same individual too frequently to be due to chance⁴
2. Increase in non-glucosamine polysaccharides as in rheumatic fever⁵
3. Decrease in circulating 17-hydroxycorticosteroids⁵
4. Increase in endogenous corticotropin⁵

AGAINST

1. Females predominate⁶
2. Heart disease is less common than with other manifestations⁷
3. No increase in hexosamines⁸
4. No bone marrow plasmacytosis⁹
5. No heart disease occurs in the absence of an increased sedimentation rate⁶
6. No increase in non-specific hyaluronidase inhibitor¹⁰
7. Negative C-reactive protein¹¹
8. No increase in serum muco-proteins¹²
9. Normal skin response to tetrahydrofurfuryl ester of nicotinic acid¹³

this relationship (Table 2) are the frequent occurrence of chorea during the course of rheumatic illness, and the later development of rheumatic heart disease in patients who previously had had chorea. A few of the non-specific tests show the same abnormalities in chorea and in rheumatic fever. On the other hand, many non-specific reactions differ in the 2 conditions. The sedimentation rate and C-reactive protein reactions, for example, are not abnormal in chorea unless other signs of inflammatory rheumatism are present.

MINOR MANIFESTATIONS

Turning now from major to minor manifestations, the symptoms and signs may be divided into clinical and laboratory findings. Clinically, fever and arthralgia are the most common, but they may

4. Wilson, M. G.: Rheumatic Fever, New York, The Commonwealth Fund, 1940, p. 201.

5. Ainger, L. E.; Ely, R. S.; Done, A. K.; Brill, A. B., and Kelley, V. C.: Sydenham's chorea. I. Evidence of abnormal adrenal cortex function, Am. J. Dis. Child. 89: 575-579 (May) 1955.

6. Jacobson, E.: Rheumatic fever with chorea minor; Clinical study with special reference to prognosis, Acta Paediat. (suppl. 7) 33: 1, 1946.

7. Ash, R.: First ten years of rheumatic infection in childhood, Am. Heart J. 36: 89 (July) 1948.

8. Rosenberg, C., and Schloss, B.: Plasma hexosamine levels in acute rheumatic fever, Am. Heart J. 38: 872 (Dec.) 1949.

9. Good, R. A., and Campbell, B.: Relationship of bone marrow plasmacytosis to the changes in serum gamma globulin in rheumatic fever, Am. J. Med. 9:330 (Sept.) 1950.

10. Good, R. A., and Glick, D.: Mucolytic enzyme systems. IX. Nonspecific hyaluronidase inhibitor in rheumatic fever, J. Infect. Dis. 86: 38 (Jan.-Feb.) 1950.

occur in so many different illnesses that they provide only confirmatory evidence of rheumatic fever, when more characteristic findings also are present. A history of rheumatic fever in the past, or the presence of rheumatic heart disease provides additional weight to the diagnosis but does not prove that an acute illness is of rheumatic origin.

Laboratory tests also give evidence in favor of, or against the diagnosis of acute rheumatic fever. Evaluation of such tests must be carried out with painstaking caution. Many physicians fall into the error of considering PR prolongation on electrocardiography as a definite sign of rheumatic involvement. Actually, increased PR intervals have been recorded in other illnesses, such as diphtheria, congenital lesions, and so forth.

Similarly, QTc widening, while common in acute rheumatic fever, has been reported in many other acute illnesses. Leucocytosis and increased sedimentation rate are recognized as indications of infection, but occur in many different diseases. These findings provide little or no help in diagnosing the specific type of infection.

Lately, the C-reactive protein has assumed importance in the minds of many physicians, as an indication of acute rheumatic fever. Stimulus to the prominence of this test was provided by Dr. Stollerman¹¹ about 5 years ago, when he described the accuracy with which this test reflected the state of inflammation in rheumatic fever. He made it clear that the C-reactive protein test was not diagnostic, but could be used as a guide to progress, after the rheumatic nature of the illness had been established. That the C-reactive protein is present in many different conditions has been demonstrated by Rantz and coworkers, and by others.¹⁴ In an acute illness, on the other hand, the absence of these abnormalities—leucocytosis, sedimentation rate elevation, and C-reactive protein—are weighty factors militating against, but not eliminating, the diagnosis of acute rheumatic fever.

11. Stollerman, G. H.; Glick, S.; Patel, D. J.; Hirschfeld, I., and Rusoff, J. H.: Determination of C-reactive protein in serum as a guide to the treatment and management of rheumatic fever, *Am. J. Med.* 15: 645-655 (Nov.) 1953.

12. Kelley, V. C.; Adams, F. H., and Good, R. A.: Serum mucoproteins in patients with rheumatic fever, *Pediatrics* 12: 607-621 (Dec.) 1953.

13. (a) Streitfeld, M. M., and Saslaw, M. S.: A cutaneous test for rheumatic activity in children, *Proc. Soc. Exper. Biol. and Med.* 84: 628-631, 1954; (b) Saslaw, M. S., and Streitfeld, M. M.: Skin response to trafuril: Possible test for rheumatic activity, *J. Florida M. A.* 41: 21-25 (July) 1954.

14. Roantree, R. J., and Rantz, L. A.: Clinical experience with the C-reactive protein test, *A. M. A. Arch. Int. Med.* 96: 674-682 (Nov.) 1955.

The group A beta hemolytic streptococcus has been related to rheumatic fever etiologically, and every acute episode of this disease is believed to follow an infection with this organism. The recovery of the group A streptococcus from the throat of a patient, and the ASLO response, will be discussed below.

SUGGESTIVE SIGNS AND SYMPTOMS

Finally, in addition to the major and minor manifestations, a large group of non-specific signs and symptoms often are found in rheumatic fever. These may be systemic or local, but occur so frequently in any of a number of acute illnesses that they can be considered only as suggestive or suspicious.

CLIMATIC EFFECTS

The interpretation of syndromes may be influenced by the location in which the physician practices. In an area of high prevalence of rheumatic fever and rheumatic heart disease, the doctor will be more willing to diagnose acute rheumatic fever in the presence of non-typical symptom complexes than will the physician in an area where the disease is not as common. In general, more southerly locations present lower rates of rheumatic heart disease than northerly areas.¹⁵ While the range of prevalence of rheumatic heart disease is wide in northern regions (16.3-45/1000), at its lower level, the rate is still 3 times as great as in southern localities (3.8-5.0/1000). The relationship between prevalence of rheumatic heart disease and latitude is even more apparent when the rates are tabulated against a contour map of the Eastern United States coastline.¹⁶ A word of caution. Undoubtedly this geographic correlation is influenced by climate. Latitude is only one of the determinants of climate. Therefore the doctor cannot use latitude alone as a guide to anticipated rheumatic rates. Nonetheless, the prevalence of clinical rheumatic heart disease appears to bear a definite relationship to climate. Further evidence of the infrequency of the disease in the Miami area has been collected. One thousand one (1,001) native born school children, age 11 to 14, were examined for the presence of rheumatic heart disease.¹⁵ Of this group, 3 were shown to have definite rheumatic cardiac lesions, while 2 were suspicious. Interestingly enough, all 5 of these children were Negroes, despite the fact that the larger number of examinees were white. In another

15. Saslaw, M. S.; Ross, B. D., and Dobrin, M.: The incidence of rheumatic heart disease in native school children of Dade County, Florida, *Am. Heart J.* 40: 760-765 (Nov.) 1950.

16. Saslaw, M. S., and Streitfeld, M. M.: Group A beta hemolytic streptococci in relation to rheumatic fever, *A. M. A. J. Dis. Child.* 92: 550-557 (Dec.) 1956.

study¹⁷ the records of 417 successive patients attending the Out-Patient Department of the National Children's Cardiac Hospital who were considered to have definite, potential or possible rheumatic heart disease were tabulated according to birthplace—Florida or outside Florida. The non-Floridians accounted for 2 to 2½ times as many rheumatics as the Floridians.

Another study was carried out on autopsies¹⁸ performed in Miami from 1950-1955. Of 6,258 deaths, autopsies were performed on 2,967. Seventy-five of the autopsies revealed the presence of rheumatic heart disease, according to pathologic criteria described by Wallach, Lukash and Angrist.¹⁹ These 75 included those who died of rheumatic heart disease and its complications as well as those who died of other conditions, in whose hearts rheumatic lesions were discovered without having been expected. The birthplace of each person autopsied was tabulated as to whether it was Florida or outside Florida. The same procedure was carried out for the 75 autopsies which revealed the presence of rheumatic heart disease. Native Floridians accounted for 25 per cent of all autopsies, but only 8 per cent of the rheumatic heart disease. Thus, in autopsy material, rheumatic heart disease was observed in Floridians only 1/3 as often as in the hearts of non-Floridians.

GROUP A BETA HEMOLYTIC STREPTOCOCCI

What is the relationship of the Group A beta hemolytic streptococcus to rheumatic fever, and the usefulness of this finding as a diagnostic aid? In infections with this organism, rheumatic fever has been reported to occur in 3 per cent of untreated patients.²⁰ This infection, thus, is of considerable value as a minor manifestation. Unfortunately, the diagnosis of streptococcal infection often cannot be made simply. In studies carried out by routine monthly throat swabbing of children attending public schools, we found²¹ an average up to 20.0 per cent of children harboring these organisms in the throat in any one month.

17. Saslaw, M. S.; Ross, B. D., and Hernandez, F. A.: Rheumatic heart disease in native-born Floridians and non-Floridians, *Am. Heart J.* 47: 580-586 (Apr.) 1954.

18. Saslaw, M. S., and Johnson, L.: Frequency of rheumatic heart disease in Miami, Florida. Autopsy findings, *Am. Heart J.* 53: 814-820 (June) 1957.

19. Wallach, J. B.; Lukash, L., and Angrist, A. A.: An interpretation of the incidence of mural thrombi in the left auricle and appendage with particular reference to mitral commissurotomy, *Am. Heart J.* 45: 252-254 (Feb.) 1953.

20. Ramelkamp, C. H.; Wannamaker, L. W., and Denny, F. W.: The epidemiology and prevention of rheumatic fever, *Bull. New York Acad. Med.* 28: 321, 1952.

21. Saslaw, M. S., and Streitfeld, M. M.: Group A beta hemolytic streptococci and rheumatic fever in Miami, Fla.: Bacteriologic observations from October 1954 through May 1955, to be published, *Diseases of the Chest*.

In one "epidemic" outbreak,²² limited to 2 classrooms in a single school, study of the children in these 2 classes showed that 35 and 50 per cent had Group A type 6 organisms in their throats. These children were well enough to attend class. Their illness records failed to show any greater illness rates than were observed in children not harboring streptococci. These 2 classes showed no increased absentee rates, nor was the absentee rate for the entire school any higher than during those months when the A₆ epidemic had not yet started; the rate for the school was lower than that for most schools in the city.

Though the average monthly streptococcal recovery rate²¹ is 14.2 per cent, 41.1 per cent of the children studied monthly for 8 months yielded Group A beta streptococci on one or more occasions. These figures were obtained when studies were conducted in children well enough to attend class. If they were ill, and not in school, no throat cultures were taken at such times of absence. Thus the simple recovery of Group A streptococci from the throats of children cannot be considered as evidence per se of streptococcal infection.

What about antibody responses? The most common reaction studied is the antistreptolysin O (ASLO) titer. In our studies²³ in 1953-1954, blood samples were drawn every 2 months from children 6-8 years of age at the same time that monthly throat cultures were taken. When no beta streptococci were recovered, or when only Group B organisms were found, titers were low. Organisms belonging to Groups C and G, and perhaps F, are capable in some instances of elaborating streptolysin O.²⁴ These organisms were associated with higher titers than in the absence of beta streptococci, but highest averages were obtained with Group A typable and non-typable strains. In the next year's study,^{16, 22} blood samples were collected at the beginning and ending of the school year, on each child. Whenever the throat culture yielded a beta streptococcus, subsequent blood samples were taken 2, 4, 8, 16 and 32 weeks later, until the end of the period of investigation. Despite the closer relationship between blood samples and streptococcal isolates, the findings in the various categories remained essentially unchanged. Again the geographic factor appears to

22. Saslaw, M. S., and Streitfeld, M. M.: Group A beta hemolytic streptococci and rheumatic fever in Miami, Fla.: Correlation between school absenteeism, the isolation of beta hemolytic streptococci, and antistreptolysin O serum responses, submitted for publication, *Diseases of the Chest*.

23. Streitfeld, M. M.; Saslaw, M. S., and Doff, S. D.: Group A beta hemolytic streptococcus and rheumatic fever in Miami, Fla. *Pub. Health Rep.* 71: 745-755 (Aug.) 1956.

24. Todd, E. W.: The streptolysins of various groups and types of hemolytic streptococci, *J. Hyg.* 39: 1-11, 1939.

play a role. Comparison of the Miami data with studies carried out in San Francisco²⁵ shows considerable difference in average titers in the 2 areas.

The results just presented show average values and may serve some purpose in indicating the overall streptococcal pattern in an area. But how can this test assist in the diagnosis of rheumatic fever in the individual case? If a child is suspected of having this disease, a blood sample is drawn. According to Massell²⁶ and to Stollerman,²⁷ within 4 to 6 weeks after onset, the ASLO titer is almost always elevated (over 259 units according to Massell²⁶). In our series, in Miami, single titers have not been elevated uniformly. However, the study of serial titers may reveal abnormalities not apparent in single blood samples. Most investigators accept a rise in titer of 2 tubes as a significant change, though it would be more accurate perhaps to require a 3-tube rise.

In one portion of our study²⁸ in Florida, serial blood ASLO sampling was carried out. With no beta streptococci or only Group B organisms, only 5 per cent of the children showed 2-tube rises in titer. Of those with Group C, F or G organisms, almost 18 per cent had significant elevations. Over 50 per cent of the children harboring Group A organisms showed rises in ASLO titer of 2 tubes or more.

How does this add up? Does the finding of a Group A organism in the throat together with an ASLO rise of 2 tubes constitute the basis for the calculation that 3 per cent of all untreated streptococcal infections lead to rheumatic fever? Let us examine some recent figures for Miami. Over 35,000 children, 6 to 9 years of age, were attending public schools in Dade County (the Miami Area) in the school year 1954-1955.¹⁶ If 40 per cent of these children harbored Group A streptococci at least once in the 8-month school year, over 14,000 may be presumed to have carried these organisms. Half of these, over 7,000, might have had ASLO rises of 2 tubes or greater, and 3 per cent of these, 212 Miami children, 6 to 9 years of age, should have

had rheumatic fever episodes. During that time, there were only 61 episodes of active rheumatic fever reported in the entire state of Florida, in people of all ages. Reporting of rheumatic fever by physicians requested to send information to the State Board of Health is not an accurate method of determining incidence figures. To improve the validity of these data, we inaugurated a case registry²⁹ for rheumatic fever and glomerulonephritis in September 1955. Every general practitioner, internist, cardiologist, pediatrician, orthopedist, urologist and hospital in the Greater Miami Area was contacted by phone on a monthly basis, and questioned as to any acute episode of either of the 2 diseases they may have seen or recorded within the previous month. For each positive report sufficient data were collected to determine the location of residence at the time of onset of illness, and the symptoms, signs and laboratory findings upon which the physician based his diagnosis. Appropriate hospital records were reviewed. For 13 months, from Sept. 1, 1955 to Oct. 1, 1956, there were 17 acute rheumatic and 18 acute glomerulonephritic episodes reported. Only 3 of the rheumatic incidents occurred in the 6-9 year old children, the group in which 212 episodes in 8 months had been anticipated. This small number of attacks is very low for an area involving about 600,000 people.

The finding of group A beta hemolytic streptococci and the presence of a 2-tube rise in ASLO titer generally are considered to be indications, together, of streptococcal "infection," and 3 per cent of streptococcal infections, if untreated, are likely to culminate in rheumatic episodes. This statement has been modified³ recently to indicate that this 3 per cent figure had been found to apply only to certain population groups, and in epidemics. An "epidemic" of streptococcal infections will be expected to include, in addition to streptococci in the throat and ASLO response, the presence of clinical symptoms. We believe it is necessary to reconsider¹⁶ and define the term streptococcal infection. The presence of clinical, bacteriological and immunological evidence is required to be sure of an overt infection. To this group of patients our data give no indication that the 3 per cent figure does not apply. The concept that occult infection is present when there are bacteriological and immunological findings without clinical symptoms, in the Miami area, does not permit application of the 3 per cent figure. Clinical illness with immunological response in the absence of streptococci may be due to failure to recover a streptococcus really present (as may occur if the subject has taken a drink immediately before swabbing) or,

25. Rantz, L. A.; Randall, E., and Rantz, H. H.: Antistreptolysin "O": A study of this antibody in health and in hemolytic streptococcus respiratory disease in man, *Am. J. Med.* 5:3 (July) 1948.

26. Roy, S. B.; Sturgis, G. P., and Massell, B. F.: Application of the antistreptolysin O titer in the evaluation of joint pain and in the diagnosis of rheumatic fever, *New England J. Med.* 254: 95-102, Jan. 19, 1956.

27. Stollerman, G. H.; Lewis, A. J.; Schultz, I., and Taranta, A.: Relationship of immune response to group A streptococci to the course of acute, chronic and recurrent rheumatic fever, *Am. J. Med.* 20: 163-169 (Feb.) 1956.

28. Streitfeld, M. M., and Saslaw, M. S.: Beta hemolytic streptococci and rheumatic fever in Miami, Fla.: Antistreptolysin O titer determinations between October 1954 and May 1955, submitted for publication, *Diseases of the Chest*.

29. Saslaw, M. S.: Case registry for rheumatic fever and glomerulonephritis, *J. A. M. A.* 165: 1129-1130 (Nov. 2) 1957.

conceivably, to an anamestic response caused by other organisms.³⁰

The physician who sees a patient suspected of suffering from acute rheumatic fever will have corroborative evidence for this illness if he elicits the history that the child was ill with a sore throat, about 3 weeks previously; with a group A beta hemolytic streptococcus isolated from the throat; and with serial ASLO titers rising 3 or more tubes to a level of 300 or above. The absence of this complete complex does not rule out the diagnosis but throws more of the burden on the doctor's judgment.

SKIN TEST

There are many other laboratory procedures that may be helpful in mobilizing additional evidence for acute illness, but most immunologic and chemical tests are difficult, unreliable, or too non-specific. Several years ago, we studied¹³ the clinical response to a drug, tetrahydrofurfuryl ester of nicotinic acid. This material has been used in European countries in ointment form for the rubefacient treatment of joint distress in rheumatoid arthritis. Nassim and Banner³¹ observed that the redness that occurred in most people failed to appear in 5 instances of acute illness. When these 5 patients were treated with cortisone or ACTH and the disease was brought under control, the inunction of trafuril resulted in a normal red response. Streitfeld and Saslaw¹³ studied the action of the ointment on active rheumatic patients, as well as normal persons, inactive rheumatics, and many other disease conditions. Abnormal reactions are of 2 varieties. Either they occur with absence of any redness, or an actual blanché may appear. Abnormal responses have been observed in a number of conditions in addition to acute rheumatic fever. Thus, streptococcal infections such as scarlet fever may be accompanied by skin blanching at the site of inunction. However, the abnormal skin response disappears rapidly, generally in 3 or 4 days, whereas in rheumatic fever it is prone to continue for several weeks, or until the illness is brought fairly well under control by appropriate medication. Rheumatoid arthritis, in some instances, has been reported to be associated with abnormal skin responses. Bartfeld and Hartung³² reported this abnormality in about 20 per cent of their patients, while Oka³³ in Fin-

land, and de Vaillancourt³⁴ in Canada, found almost all of their rheumatoids to respond abnormally. From these divergent reports it appears likely that acute episodes early in the span of rheumatoid arthritis may be responsible for abnormal skin reactions, while later in the illness, the skin returns to more normal behaviour, even during acute flare-ups. Other illnesses are associated with abnormal skin responses only occasionally. In a series of normal controls,¹³ 258, or 95.2 per cent, of 271 subjects showed a normal red response while only 9 were not typical. Of 57 patients with congenital heart disease, 52 showed typical, normal reactions to trafuril inunction. When the ointment was rubbed into the skin of 531 rheumatic fever patients, patients ill with active disease showed non-typical responses in 86 per cent of 114 subjects tested. Of 353 children considered to be in the inactive stage of the disease, 97.2 per cent reacted in typical fashion. Where activity was considered to be suppressed by medication, 15 of 22 children responded typically, while the remaining 7 still failed to show normal reddening. There were 39 instances in which the examining physicians could not determine whether the illness was active or inactive. Of the 39, 23 responded normally, 12 abnormally, and only 4 failed to give a definite response.

DIFFERENTIAL DIAGNOSIS

The problems involved in the diagnosis of rheumatic fever, and the difficulties in evaluating history, clinical findings and laboratory data, have been discussed. What other conditions may be confused with it? At the Out-Patient Clinic of the National Children's Cardiac Hospital, children are referred for examination because they are suspected of having the stigmata of rheumatic fever or rheumatic or congenital heart disease. A review of 2,045 successive clinical records³⁵ revealed that 46.8 per cent (957 children) had no rheumatic fever or rheumatic heart disease, 482 (23.6 per cent) had congenital heart disease, 481 (23.5 per cent) fell into the rheumatic category, and 8 (0.4 per cent) had co-existing rheumatic and congenital defects. The remaining 117 children, 5.7 per cent, were referred to the clinic because they were suspected of suffering from rheumatic disease, but were found to have other conditions. The diagnoses in these 117 patients were divided into 9 categories. Blood disorders accounted for 24 chil-

30. Kupatz, H., and Koehler, W.: Antistreptolysin reaction in diseases of childhood, *Monatsschr. Kinderh.* 103: 415-421, 1955, abstr. in *A. M. A. J. Dis. Child.* 92: 409 (Oct.) 1956.

31. Nassim, J. R., and Banner, H.: Skin response to local application of a nicotinic acid ester in rheumatoid arthritis, *Lancet* 1: 699 (April 5) 1952.

32. Bartfeld, H., and Hartung, E. F.: Correspondence, *Ann. Rheumat. Dis.* 13:70 (March) 1954.

33. Oka, M.: A nicotinic acid ester ("Trafuril") skin test in rheumatic diseases, *Acta. med. Scandinav.* 145: 258-262 (1953).

34. Vaillancourt, de G.: The cutaneous application of a nicotinic acid cream as a diagnostic aid in various rheumatic diseases, *Canad. M. A. J.* 71: 283-285 (Sept.) 1954.

35. Saslaw, M. S.; Hernandez, F. A., and Werblow, S. C.: Conditions clinically confused with the rheumatic state, *J. Pediat.* 44: 414-420 (Apr.) 1954.

dren (20.5 per cent of the 117 erroneous rheumatic diagnoses). Sick cell anemia simulated rheumatic heart disease by the presence of a heart murmur, cardiac enlargement, low-grade fever, and joint pains. The diagnosis was established by the observation of sickling in the blood smear, diffuseness of the cardiac silhouette, and by the presence of hemoglobin levels down to 6.8 G per cent. Parasitic infestations were accompanied by low-grade fever, loss of weight, fatigue, joint and chest pains. However, high eosinophil counts and stool findings helped to differentiate this group from rheumatic fever. Unclassified anemias were confused because of cardiac enlargement and heart murmurs, but red cell counts down to 2 million, with hemoglobin as low as 2.75 G per cent, were found. In allergic purpura, polyarthritides and low grade fever occurred. The presence of marked ecchymoses and eosinophilia aided in diagnosis. Finally, heart murmurs and irregularities of the heart beat were seen in 2 children, who also had palpable spleens, generalized lymphadenopathy, anemia, and history of jaundice.

Cardiac disorders were seen in 5 children, after exclusion of congenital heart disease and accidental murmurs. Arrhythmias associated with heart murmurs were shown to be nodal or sinus arrhythmia on electrocardiograms. Diphtheritic myocarditis was confused because of the presence of muscle or growing pains, but x-ray evidence of cardiac enlargement, the absence of rheumatic and the presence of a definite history of diphtheria led to the proper diagnosis. Chest pain in acute benign pericarditis was correctly diagnosed when an unexplained bout of pericarditis cleared completely, and no subsequent changes were found in 2½ years of observation.

Four children with thyroid deficiency, 1 with low calcium, 1 with rickets, and 1 unclassified endocrine or nutritional disorder were suspected of suffering with rheumatic disease because of tachycardia, heart murmur, frequent colds and joint pains. Hypertension, abnormal basal metabolic rates, response to appropriate medication, the presence of "pot belly" and anemia led to appropriate classification.

The fourth category of confusion, febrile illnesses, accounted for 13, or 11.1 per cent of the 117 errors in diagnosis. Tuberculosis was associated with low grade fever, joint and chest pains, heart murmur, weight loss and listlessness; it was characterized by x-ray evidence of pulmonary tuberculosis, hemoptysis, pericardial and pleural fluid, cervical lymphadenopathy and positive tuberculin test. Brucellosis, with frequent bouts of high fever, was observed in a child who gave a history of drinking raw milk. Cellulitis of the hand, with heart murmur, was treated and the murmur disap-

peared. Dental caries and suppurative adenitis were eliminated from consideration of the rheumatic state when careful examination and appropriate treatment resulted in the disappearance of low grade fevers.

Organic neurological disorders were referred, also, as possible rheumatics. In 4 instances, unconsciousness was attributed to circulatory collapse, but the episodic character of attacks, groaning, eye rolling and urinary incompetence led to the correct diagnosis of epilepsy. In one child, the symptoms of cold, fever, migratory joint pains and tachycardia were accompanied by blindness and absent heart murmur. A diagnosis of brain tumor was made, and later verified at autopsy. Joint pains and low grade fever were shown to be due to poliomyelitis, by the additional presence of headache and dizziness, and the inability to straighten the leg, in a community in which there was a high polio rate.

Functional neurological disorders accounted for 16 rheumatic suspects (13.7 per cent of the 117 diagnostic problems). Fatigue, heart murmurs, chest pain, low-grade fever, malaise and joint pains were common in this group. Absence of specific findings and the co-existence of a variety of emotional disturbances were of assistance. This group of patients showed marked concern about the heart, consciousness of the heartbeat, often gave histories of heart disease in other members of their families, had tachycardia and pounding of the heart, fainting spells showed tension, irritability, marked restlessness and nervousness, personality changes, depression, temper tantrums, headaches, migraine, nail biting, teeth grinding, and many other disorders characteristic of neurotic behaviour.

Nephritis and pyelitis were diagnosed in 7 patients found to have renal disease. These children were suspected of being rheumatic because of sore throat, fever, joint pains and heart murmurs. Correct diagnoses were made in the presence of albuminuria, hematuria, low urinary specific gravity, hypertension, swelling of feet, face and hands, and so forth.

The largest single category of erroneous diagnoses were respiratory illnesses, accounting for 33 cases (28.2 per cent of the 117). Seventeen of these were infections, including tonsillitis, bronchitis, bronchiectasis, sinusitis and pneumonia. Confusing findings were joint pains, heart murmurs, low grade fever, leukocytosis, elevated sedimentation rates, recurrent colds and fatigue. Clarification of the diagnoses depended on findings of hypertrophied, congested, cryptic tonsils, rapid fall in sedimentation rates with improvement of the clinical illnesses, postnasal drip, cervical adenitis, pulmonary rales, and x-ray evidence

of sinus or pulmonary disease. Allergic asthma was observed in 12 children who complained of dyspnea, cough, heart murmur, recurrent fever, and joint pains. The diagnosis was established by noting the family history of asthma, history of attacks of wheezing, the presence of expiratory rales and wheezes, eosinophilia, and x-ray evidence of peribronchial infiltration. Allergic rhinitis occurred with frequent sore throats, joint pains, heart murmurs, fatigue and fever. Proper diagnosis was made in consideration of the presence of perennial rhinitis with morning sneezing, chronic nasal discharge, frontal headaches and pharyngeal lymphoid hyperplasia. In 2 children, dyspnea, cyanosis, and chest pain were associated with x-ray evidence of shadows interpreted as indicating cardiac enlargement. Careful roentgenography revealed a mass in the right lower lobe in one instance, and a mass causing constriction of the superior vena cava in the other.

The final category of confusions is miscellaneous. Cervical rib associated with a heart murmur was correctly diagnosed by observing hypertension in the right arm and x-ray proof of a right cervical rib. Recurrent sore throats, joint pains, fever, elevated sedimentation rates, and heart murmur characterized 4 patients who were shown to be suffering with rheumatoid arthritis by the presence of multiple joint involvement, spindling of fingers, and permanent joint damage. In one child, polyarthrititis and elevated sedimentation rate were the presenting symptoms. The history of recurrent, frothy, bloody diarrhea, together with x-ray evidence of ulcerative colitis, helped to establish the co-existence of rheumatoid arthritis and ulcerative colitis.

SUMMARY

The modified Jones' criteria provide an excellent guide to the diagnosis of rheumatic fever. However, the physician is cautioned that these criteria are not absolute, and final evaluation of an illness depends on the keenness of the physician's perception and the accuracy of his judgment. There are many pitfalls, and a great many diseases can be confused readily with rheumatic fever. The careful doctor must avoid these errors. He must consider the influence of his local climate on the frequency of rheumatic fever, as well as any available data he may be able to obtain on the patient's heredity and environment. Above all, he should remember that, as a general rule, to mislabel erroneously some other illness as rheumatic is far more disastrous to the individual patient than to fail to recognize, as rheumatic, a very mild episode of this disease. The diagnosis of rheumatic fever rests finally on the acumen and judgment of the physician.

Medical School Enrollment Continues to Increase—Of every 100,000 persons in the United States, 4.7 were enrolled as freshmen in American medical schools during 1956-57.

In fact, there were more freshmen medical students that year than ever before: 7,791 compared with 7,686 in 1955-56, according to the 57th annual report on medical education made by the American Medical Association's council on medical education and hospitals.

However, the number of 1957 graduates (6,796) from 78 approved four-year schools was slightly smaller than the 6,845 graduated in 1956.

The 7,791 freshmen were part of 28,852 students enrolled in the 78 four-year approved medical schools and four schools of two-year basic medical science in the U. S. 1956-57 was the eighth consecutive year that a new record in total enrollment was established, the report said. In 1956-57 there were 28,639 students enrolled.

In addition to teaching these medical students, the schools also undertook to teach more than 62,000 other undergraduate students in allied medical fields. These were in dentistry, nursing, pharmacy, x-ray, and medical technology, arts and science courses, physical or occupational therapy, and medical records and medical librarianship. The schools also assisted in the education of interns and residents and practicing physicians doing postgraduate study.

The schools spent more than 200 million dollars in 1956-57, the report said. The cost of supporting the many activities of medical schools has risen steadily with the expansion of those activities and with the general increase in the price of services and goods. Since so many of the schools' funds come directly or indirectly from public sources, there should be available a more meaningful method of accounting for expenditures, the report said.

In fact, an editorial in the November 16 A. M. A. Journal, in which the report appeared, called for the development of a uniform system of cost accounting among medical schools. In that way, schools could tell more exactly where their money goes and why they need the amounts they do.

Much financial support has been given to the schools by two organizations, the American Medical Education Foundation, which is supported by physicians and medical organizations, and the National Fund for Medical Education, which draws its funds from industry and the Ford Foundation. During 1956, 39,892 contributors gave the foundation \$1,072,727, an increase of 40 per cent over 1955. The National Fund gave \$3,066,450 to medical schools last January.

The report also showed the following:

—During 1956-57 the schools of medicine at the University of Mississippi and the University of Missouri graduated their first classes. The University of Florida Medical School, Gainesville, Fla., and Seton Hall College of Medicine and Dentistry, Jersey City, N. J., enrolled their first classes.

—Beginning in September 1960, the University of West Virginia will enroll third year medical students. At present it has only a two-year school of basic science. First classes will be admitted at the University of Kentucky, Lexington, in 1959 or 1960.

—Thirty-three schools reported initiation or completion of major construction projects. Nineteen began projects estimated to cost about \$32,200,000, while 20 completed projects representing an investment of \$67,500,000.

—There were 1,646 women enrolled in medical schools during the year, and 330 women were graduated in 1957.

TORSION OF THE OMENTUM AND APPENDICES EPIPLOICAE CAUSING ACUTE ABDOMINAL PAIN

HARRY J. TILL, M. D.
and
JOHN M. CAMERON, M. D.
Montgomery, Alabama

Dead or dying fat from torsion of the omentum and appendices epiploicae can cause acute abdominal pain. There are several hundred reported cases of each condition in the surgical literature,¹⁻⁹ and deaths¹⁰⁻¹⁴ have been reported. Generalized peritonitis, ileus, and intestinal obstruction were listed as causes. This probably does not give a true picture of incidence since many surgeons do not report their individual cases. We are reporting four encountered in the last two years because we believe the conditions should be considered preoperatively and looked for in operations in which expected pathology is not found.

Primary torsion of the omentum may consist of a twisting of a segment of the greater omentum without apparent mechanical cause. This does not include primary idiopathic segmental infarction of the omentum or torsion of the omentum due to adhesions and bands or incarceration of omentum in the various herniae. The etiology of the lesion is unknown in spite of several attempts to ex-

plain it. There is no definite relation to sex or age. It seems to occur in well-developed people who have a moderate amount of intra-abdominal fat.

The onset is usually rather sudden in an otherwise healthy person. On close questioning the patient can almost always date the pain to a certain moment. The pain is usually not very severe at first. The symptoms, including fever and leukocytic response, depend on the progression of the gangrenous process in the abdomen. These symptoms and findings make it almost impossible to differentiate this disease preoperatively from other acute surgical conditions. Most of the patients in our practice and in the literature have been operated on for possible appendicitis or for the so-called "surgical abdomen." The diagnosis is made on the presence of acute abdominal pain with or without increase in temperature, white count, or abdominal distention. One of our cases had a palpable mass before surgery, with serosanguineous fluid in the abdomen. Twisted infarcted omentum has been confused with acute cholecystitis, pancreatitis, perforated duodenal ulcer, appendicitis and diverticulitis.

Once the abdomen is opened and the expected not found, the surgeon should look for the cause of the patient's pain. Meckel's diverticulum is routinely looked for and seldom found. Exploration of the pelvis in females frequently reveals the cause of the trouble. If neither of these examinations reveals the cause of the pain, then the surgeon should consider twisted omentum or appendices epiploicae. In no case with negative findings should the abdomen be closed without adequate hand exploration. The incision is enlarged if necessary.

Twisted gangrenous appendices epiploicae fall into much the same category as the above. One is not surprised to find this condition since these appendages are pedunculated and frequently club-shaped. They have a small base. With the activity of the intestine, there is every chance for a twist. The pain here may be on the left or right side. In one of our cases it was on the left and later moved to the right. The epiploic appendages are most frequent in the sigmoid, next in the descending, and least in the transverse colon. If they are in the sigmoid, due to its motility the pain may be located on either the right or left side. If they

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12. Ebner: *Deutsche Ztschr. f. Chiro.* 98: 311, 1909.
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are in the descending colon or transverse colon the pain will usually be on the left. The symptoms are those of acute abdominal pain. This usually is not so severe as the pain caused by a twisted omentum because the epiploic appendages are not so large. The patient may recover after the appendage has become gangrenous and sloughed off. This may explain some of the calcified free bodies in the abdomen. Treatment again is surgical by ligation of the base and excision of the diseased appendage.

Case History of B. W.: This nine year old white male was admitted to St. Margaret's Hospital November 18, 1956. He stated that he had been well and in good health until after school on Friday, November 16, 1956. He said that when he got off the school bus there was a rather sudden, sharp pain in the mid-abdomen. The pain continued and he did not feel like eating supper that night or anything much the next day. He was seen by a physician but the symptoms were not sufficient to warrant an appendectomy immediately and he was hospitalized and watched. On Sunday morning the pain was much worse and localized in the right lower quadrant. He had a little fever and rather typical symptoms now of acute appendicitis. He had vomited once during this spell. The patient had had a similar attack four or five years previously and was treated medically and recovered. Physical examination revealed a nine year old white male who was afebrile and complained only of pain in the abdomen. The abdomen was very slightly distended. There was exquisite tenderness and rebound tenderness in the right lower quadrant with pain referred to the right lower quadrant when pressure was made elsewhere on the abdomen. There were a few hypoactive bowel sounds. No hernia was present. Rectal examination was essentially negative. The white count was 16,200; hemoglobin 90%, 13 grams. Differential was 4 stabs, 71 segs, 24 lymph, 1 mono. Urine had a 4 plus acetone, otherwise negative. The patient was considered to have a rather typical case of acute appendicitis and an operation was performed. The appendix was found to be normal and there was no mesenteric adenitis. Examination of the terminal ileum revealed no Meckel's diverticulum. A two-finger exploratory of the right side of the abdomen revealed a mass in the right mid-quadrant in the omentum. This was brought down into the wound. It was found to be a piece of twisted omentum which was gangrenous. It was about three or four centimeters in size. The twist was clearly visible and was easily clamped, ligated and removed. The patient made an uneventful recovery.

Case History of A. B.: This patient was seen Monday, March 14, 1955. An 8 year old white fe-

male, she developed pain in the abdomen Saturday, March 12, 1955. She vomited once; had pain in the epigastric region. A pediatrician saw her, gave her an enema and light diet. Pain persisted through Sunday and Sunday night; she was given another enema. Monday the pain continued and surgical consultation was sought.

Examination revealed the temperature to be 100° F. The pulse was 100. The patient was a rather obese white female, large for her age. The examination was essentially negative except for the abdomen. There was exquisite tenderness in the right upper quadrant of the abdomen a little medial to the gallbladder but definitely above the umbilicus. There was no tenderness at McBurney's point. Bowel sounds were hyperactive. The left side was not tender at all. A questionable mass could be palpated in the right upper quadrant. No masses were palpable on rectal examination nor was there any tenderness. White count was 12,100. Essentially normal differential; 13 grams hemoglobin; urine negative. Patient was hospitalized and the white count was found to be 18,450. Temperature was 101 degrees. A mass was rather definitely palpated at this time. A laparotomy was done through a right rectus incision and the patient was found to have a piece of twisted omentum the size of two fingers in the upper abdomen, and which was gangrenous, with free blood-tinged fluid in the peritoneal cavity. The omentum was resected, the appendix removed. It was large but normal otherwise. The patient made an uneventful recovery.

Case History of B. M.: This thirty-five year old white male was well essentially until October 31, 1956 when he suddenly, about 10:00 A. M. while sitting in a chair, developed soreness in the left lower quadrant of the abdomen. It was made worse by moving or changing positions. He saw his physician and was given conservative therapy in the form of low enemas and antispasmodics. The pain continued in the left side of the abdomen, going up towards the upper part and cutting off his breath when he would take a deep breath. This continued for several days. His white count was first 7,500. On November 3, 1956 the white count was 4,800. He continued to have pain in the left side of the abdomen and was admitted to the hospital on November 3, 1956 when we saw him.

This patient had a rather atypical type of left lower quadrant pain. It was not exquisite but definite. It was different on different examinations. There was no right sided pain. We thought he had diverticulitis or diverticulosis but on the morning of November 5, 1956 the patient became worse. The pain then localized in the right lower quadrant of the abdomen over McBurney's point

where there was definite tenderness and rebound tenderness. Surgery was thought indicated for possible appendicitis. A right rectus incision was made; no pus or fluid was encountered. Laparotomy revealed a one by two inch twisted epiploic appendage on the descending colon at the brim of the pelvis near the sigmoid. There were several twists and gangrene. This was removed and the base was ligated. No evidence of diverticulosis or diverticulitis was found. The normal retrocecal appendix was removed. The remainder of the exploratory was negative and the patient made an uneventful recovery.

Case History of R. L. D.: This forty-five year old white male was seen October 22, 1956 with pain in the right lower quadrant of the abdomen of three or four days duration. The patient stated that about three days previously he had noticed a pain in his right side, rather constant since onset, but at times he had some mid-abdominal pain. He had no nausea or vomiting and continued to eat fairly well. His bowels moved without relief. He had had urinary frequency for the previous month. There was no pain or slowing of the urinary stream; there were no previous episodes. The pain became suddenly worse on October 22, 1956. It hurt him to cough, breathe, or to ride in a car. The remainder of the history was negative.

Physical examination revealed a well-developed adult male in considerable distress, walking bent over. The physical examination was essentially negative except for the abdomen. This was flat, and no masses were palpable. Peristalsis was normal. There was marked exquisite localized tenderness in the right lower quadrant just medial to the anterior superior spine. Pressure anywhere around this area caused exquisite pain. There was referred rebound tenderness to this area. No costovertebral angle tenderness. Rectal examination was negative. White count was 10,900. Urine revealed a trace of albumin, otherwise negative. Hemoglobin 15 grams. The patient was hospitalized and operated on the same day through a McBurney incision. There was a moderate amount of inflammatory reaction in the right lower quadrant. When the peritoneum was opened, a dark, bluish-black tab measuring about three by four centimeters adjacent to the epiploic appendices was found attached to the side of the abdomen. An acutely twisted and gangrenous appendix epiploicae was seen. It was clamped and resected. Everything else seemed to be normal. The incision had to be extended medially in order to do an appendectomy for a normal appendix. The patient made an uneventful recovery.

COMMENT

These conditions are probably as frequently the cause of abdominal pain as Meckel's diverticulum

and should be looked for in the same manner. If overlooked or maltreated, they may slough or possibly be absorbed with only an adhesion remaining. Therefore, it has been suggested that these conditions may sometimes cause small-bowel obstruction due to adhesions in a patient who has had no previous operation. There have been several deaths reported in literature from both of these conditions. There have been almost no preoperative diagnoses.

SUMMARY

We are reporting two cases of idiopathic torsion of the omentum with infarction and two cases of idiopathic torsion of the appendices epiploicae with infarction as cause of acute abdominal pain. We believe these conditions should be considered preoperatively in cases of acute abdominal pain and looked for at operation after the more common causes of abdominal pain are excluded.

Forty-five Medical Schools Teach Disaster Medicine—Forty-five American medical schools are now participating in a special program dealing with the problems of military and disaster medicine.

The program, Medical Education for National Defense (MEND), was started in 1952 with five pilot schools. It has steadily expanded and now includes more than 14,000 medical students in 45 schools.

According to an editorial in the medical education number (Nov. 16) of the Journal of the American Medical Association, the program has had a "far more enthusiastic reception" in the medical schools than was expected.

It is serving a very real need: that of preparing medical students for military service and for meeting the medical needs in a disaster, the editorial said. However, it may face elimination within the next year because of the economy wave now being carried out in military establishments.

The cost of the program has been most reasonable, averaging \$10,000 per school per year, or about \$30.00 per student. Last year the total cost including the operation of a coordinator's office in Washington was \$325,000 for 35 schools.

"It is difficult to see how a more economical program could be devised to meet what is surely a real need," the editorial said.

It may be very difficult to do a similar job at a later date, and in the event of sudden attack the lives of many people may depend upon the degree of preparation of physicians in this special field of defense medicine, it said.

The program is carried out in medical schools, under the supervision of the individual school in whatever manner the faculty sees fit. Annually MEND sponsors a series of symposiums at federal medical installations. It also conducts a tour for deans and coordinators of MEND-affiliated schools, designed to introduce them to current problems and trends in the federal services.

Activities in the medical schools include special lectures, conferences, and demonstrations in surgery of trauma, war wounds, radiobiology, defense measures of chemical and biological warfare, aviation medicine, and various other medical civil defense problems.

MEND is a function of the MEND program subcommittee of the Association of American Medical Colleges.

DELALUTIN FOR PREMENSTRUAL TENSION

H. W. WATERS, JR., M. D.

Montgomery, Alabama

The symptoms of premenstrual tension are probably mentioned more often by females in their daily routines than any other syndrome of gynecology. This statement becomes understandable when one reviews the symptoms of premenstrual tension and finds that they can be divided primarily into psychological and emotional symptoms. These symptoms include nervousness, restlessness, irritability, general lassitude, changes of personality, emotional outbursts, loss of inhibitions, mental depression, headaches, crampy low abdominal pains, pedal edema, anasarca, breast tenderness, bloating, pains in the thighs, and frigidity. These usually disappear spontaneously with the menses, are taken for routine, and seldom constitute the chief complaint.

Frigidity is an addition to the usual review of symptoms and is noted only in the last two weeks of the cycle. Some women have reported relief from the tension syndrome when a successful coitus with a climax is encountered.

Premenstrual tension occurs more often in the third decade of life and many factors have been theorized to explain the modus operandi: 1. psychosomatic, 2. autonomic nervous system imbalance, 3. increased antidiuretic hormone, 4. menstrual toxins, 5. hypoglycemia, 6. allergic reactions to ovarian hormones, 7. increased estrogen activity, 8. decreased progesterone activity, 9. vitamin deficiency, and 10. gonadotropin-ovarian hormone imbalance. The author prefers an ovarian imbalance theory since it is known that the symptoms occur during the third decade of life when basal body temperature charts reveal, more often, an incomplete corpus luteal function. This gives an increased estrogen and a decreased progesterone activity. Vitamin therapy improves liver function and thus the destruction of estrogen. The linkage of autonomic nervous and hormonal systems is easily understandable. As to toxins, allergy, hypoglycemia, or antidiuretic hormone theories, there is no comment except that they appear far fetched.

In treatment of the condition the multitude of drugs that have been used imply that no one has been sufficient and that we are sorely in need of a better medication. This is what promoted the use of another drug. Hormones have been used many times. These have included estrogen, testosterone, progesterone and probably others. These hormonal products have not yielded any uniform or satisfactory results. They cannot be

said to be superior to the diuretics, sedatives, or dehydrational products.

Progesterone in oil has a usefulness of two to three days and only slightly longer when in an aqueous suspension. A new progesterone, Delalutin,* has been introduced which will give a sustained action in the body of fourteen days. This product has been used in many hormonal conditions but very little attention has been given to its use in premenstrual tension. Table I summarizes its use.

TABLE I CLINICAL REPORTS ON PREMENSTRUAL TENSION TREATED WITH DELALUTIN				
Investigator	Dosage (I-M.)	Schedule	No. of Patients	Results
Wineberg, A. C. ^{26*}	62.5 to 250.0 mg.	Single injections	18	Definite improve- ment in symptoms
Star, P. ²⁸	250 mg.	Single injection	1	No effect
Commons, R. ¹⁰⁵	125 to 250 mg.	1 to 6 single injections	7	Subjective im- provement in 4 pa- tients; no effect in 3 patients
Tyler, E. T. ¹⁰¹	125 mg.	Single injections	7	Excellent in 1 patient; good in 3 patients; fair in 1 patient; slight in 2 patients.
			33	

*All are clinical reports to
E. R. Squibb

Delalutin, 125 mg., was given to 30 white women by intramuscular injection on the fourteenth day of the menstrual cycle. It has been administered to many more women than this but, in order to eliminate new medication psychology and physician enthusiasm, this small group has been used as a pilot. The injections were performed by the office nurse and in most instances the patient did not see the physician except for the initial visit and evaluation of the first injection. Therefore, no apology is made for the small series of cases. A period of seven to nine months has elapsed since these injections were begun and this has been on purpose in order to evaluate the merits of the drug more properly.

TABLE II		TABLE III		TABLE IV	
Age	Results	No. of Injections			
17	1	Complete	23 76.7%	1	11
20-24	3	Good or		2	5
25-29	5	Improved	3 10.0	3	10
30-35	12	Worse	1 3.3	4	1
36-40	4	Unknown	3 10.0	5	0
40 & over	5			6	2
	30		30 100%	7 or more	1
					30

From Table II one can see that the majority of the patients are over 25 and that 30 to 35 years of

*Supplied for this study by E. R. Squibb.

Read before the Covington County Medical Society, Opp, Alabama, April 2, 1957.

age is the most frequent.

It would appear that the drug gives complete relief from the premenstrual symptoms, as revealed by Table III, in 76.7 per cent of the cases, and another 10.0 per cent had good relief.

The number of injections administered to each patient was thought to be of some importance (Table IV). These women were instructed to take an injection on the fourteenth day of the cycle for three months, skip the fourth month, and repeat the course should symptoms warrant it. It can be noted that the majority took one or three injections. It would appear at first glance that the number of one-injection patients, 11 patients or 36.7 per cent, might be classified in the failure group. However, on closer scrutinizing this group, we find a different situation. One was psychotic and made worse, one had carcinoma of the cervix, one had endometriosis, one had relief from the tension but the menstrual cramps were worse and therefore discontinued, two have been seen since but did not think the tension enough for the injections, although they were relieved by the injection, four live too distant from the city (50 to 200 miles), and one is unknown.

The three-injection group can be considered the patients who thought the injections were worth while, but why is there such a paucity of cases to repeat after skipping a month? Closer follow-up of this group is even better than was anticipated. Eight reported that the tension was less or none and no more needed, one was a sterility case that became pregnant, and one reported first complete, second and third not as good but other medication was not requested.

There were four patients who have taken more than three injections. One husband sent her back after four months absence, one had two complete courses and relieved without injections, one continues off and on and relieved when taken, and one is a sterility problem and continues for sterility reasons but is relieved. There were several observations that came to my attention. 1. No patient had to be placed on other medication. 2. Husbands often notice the difference and insist that the wife return for more injections. 3. Many times the results were expressed as "wonderful," "started without knowing it," "the whole family notices the difference," and "do I have to omit the fourth injection," etc. 4. Only four patients, or 13.3 per cent, took more than three injections. 5. The injection must be given at the time of ovulation. It will not be effective before the 10th day or after the 17th day of a 28-day cycle. 6. The dose of 125 mg. must sometimes be increased on the second or third injection for complete relief.

Data have been presented on a small series of cases to show that a new product, Delalutin, is effective in the treatment of premenstrual tension.

TV May Help Children's School Work and Grades— Contrary to popular belief, television's effect on school children is not all bad, Northwestern University studies have shown.

In fact, children's strong interest in television may be an asset, if television watching is handled properly in the home, according to Paul Witty, Ph. D., director of the psycho-educational clinic, Northwestern University, Evanston, Ill.

Each year since 1949 the Northwestern clinic has studied the TV viewing habits of more than 2,000 children in the Chicago area. Children, their teachers, and their parents have been interviewed, Witty said in the November Today's Health, the American Medical Association's popular health magazine.

By the spring of 1950, after TV's first appearance in 1949, 43 per cent of the children interviewed had TV sets at home. In 1951, 68 per cent had them, and in 1957, 96 per cent had them. In one school studied this year, only one child did not have a TV set at home.

In 1950 many people believed that televising would prove a passing fancy—especially for children—and that the amount of time given to it would drop sharply after its novelty wore off. This proved unrealistic. Children spend as much or more time watching TV now than they did at first, Witty said.

In 1950 elementary school children averaged 21 hours a week watching TV; in 1951 the average dropped to 19 hours, but it went up later with the appearance of new and more appealing programs. High school students devote less time to TV; the average in 1957 was 12 hours a week.

The Northwestern studies show that TV is not having the predicted bad effect on children's health. In 1950 parents reported that children slept less, played less, and were more nervous and disturbed. But as the years have gone by, fewer and fewer parents voice these complaints, apparently because they are trying to arrange proper conditions for televising and are encouraging rest periods and changes in activities, Witty said.

While children's interests and hobbies have changed slightly since 1950, their outdoor recreation has not changed much, the studies have shown.

Emotional and nervous problems appear to be diminishing. When children who spend an extremely large amount of time watching TV have emotional difficulties, teachers have found in every case other factors, such as poor home or unfavorable environment.

Television appears to have a conflicting effect on school work and grades, Witty said. There seems to be little relationship between grades, and time spent watching television, although excessive watching appears to be associated with somewhat lower grades. However, one teacher remarked, "Good students tend to remain good; poor students stay bad."

Television may serve as a way of learning or as an incentive to learn more about a particular subject. Children who think TV helps their school work mention its value in improving vocabulary and knowledge of history, current events, science, people at home and around the world, and books. Librarians report that children are reading "more than ever," which indicates that television has not cut reading.



MEDICAL COLLEGE OF ALABAMA PROGRESS REPORT

At the 1957 session of the Association, the Dean of the College made a report to the organization which was published in the October Journal. After this paper was read, the Legislature, in regular session, took three steps of vast importance concerning the capital needs of the Medical Center:

1) Unanimously adopted a resolution urging the Board of Trustees of the University to accept the Federal grant of \$1,033,500.00 toward construction of the Research Building, use legal authority the Board already had to borrow the funds needed to match that grant, and construct the Research Building. The Legislature also appropriated funds to carry the interest on such indebtedness for each of the next two years.

2) Unanimously passed an Act appropriating \$100,000.00 as an initial payment toward the purchase of the land needed for long range development and instructing the Board of Trustees to enter a contract with the Housing Authority for the purchase of the land over a long period of time. Such a contract has now been signed, contingent upon the approval of the voters.

3) Authorized a referendum on a constitutional amendment to provide four and one half million dollars of general obligation bonds of the state to a) match the Federal grant for construction of the Research Building, b) pay in full for the purchase of the land, and c) provide one-third of the cost of a much enlarged residence for student nurses. The date set for this referendum is December 17th.

In this referendum the voters of the state have an opportunity to make certain that ample land is provided for long range development of a great medical center, that the facilities for research are greatly expanded at little cost to the state, and that the supply of registered nurses for the state is markedly expanded.

PRESENT STATUS OF CHEMOTHERAPY IN TUBERCULOSIS

*Report of Committee on Chemotherapy and Antibiotics
American College of Chest Physicians*

As in previous years this report is not intended as a detailed treatise for chemotherapy of tuber-

Editorials

culosis, but rather as a progress report or statement on currently accepted principles and practice to serve as a guide to the physician treating tuberculosis.

GENERAL CONSIDERATIONS

At this writing there is no generally accepted optimum regimen in the chemotherapy of pulmonary tuberculosis. Streptomycin (SM), aminosalicylic (PAS) acid, formerly para-aminosalicylic acid, USP XIV, and isoniazid (INH) are the three most commonly used drugs, but there is no unanimity of opinion as to which combination of these is most effective. However, it is emphasized that the best results are obtained when two or more drugs are combined and given continuously for a prolonged period of time. In general, it is probably unwise ever to treat a case of clinically active tuberculosis with one drug alone unless other drugs are contraindicated. Chemotherapy should be given for at least a year, even in minimal cases, and in advanced cases for a total of 18 to 24 months or at least until the stage of inactive disease is reached.

In all cases of tuberculosis, efforts should be made to culture the tubercle bacilli initially and to determine drug susceptibilities. This is essential in retreatment cases. Susceptibility studies are especially important if cultures remain positive, for changes in drug therapy may be based on changes in susceptibility.

SPECIFIC DRUGS

The following drugs are useful in treating tuberculosis:

Isoniazid is a potent drug. It is effective at low concentrations, is readily absorbed, and penetrates all tissues of the body. It is easily administered and is relatively nontoxic, with good patient acceptance. The most commonly accepted dosage of INH at the present time is 4 to 5 mg. per kg. of body weight daily, in two or three divided doses. It is estimated that some individuals will have inadequate serum levels of INH as measured by bioassay on this dosage level. Evidence is at hand that about 85 per cent of patients with new tuberculosis will do well on standard doses of INH (300 mg. per day) in combination with other ef-

fective drugs. In the other 15 per cent, particularly in patients with more advanced disease with large or multiple cavities, it is probably advisable to individualize the dosage of the drug, with consideration given to higher dosage. Toxic effects of this drug, particularly peripheral neuritis, are commoner at the higher levels and pyridoxine (100 mg. per day) must be administered concurrently whenever the higher dosages are to be used. Hypersensitivity reactions may occur in the use of this drug as with streptomycin or PAS.

There are two major facts to be kept in mind in the use of INH: (1) As with most of the other effective drugs tubercle bacilli readily become resistant to this drug when it is administered alone; (2) Isoniazid is degraded in human subjects into several derivatives, such as acetylisoniazid, which are biologically inactive; such inactivation varies significantly from individual to individual. Serum levels of this drug determined by the standard chemical methods will not reveal the inactivation, but it will be evident if bio-assay methods are used.

Streptomycin and Dihydrostreptomycin continue to be among the most effective antituberculosis agents at our disposal. Each has the same therapeutic value and the dosage is the same for both. They are generally administered in a dosage of at least 1 gm. twice weekly by intramuscular injection. In this dosage streptomycin rarely causes vestibular damage, and dihydrostreptomycin rarely results in deafness. In an effort to avoid these rather remote possibilities some physicians prefer a combination of streptomycin 0.5 gm. and dihydrostreptomycin 0.5 gm. In studies reported by the British Medical Research Council it was evident that, when administered in combination with daily INH, streptomycin was more effective in preventing the emergence of INH resistant organisms when given in daily dose of 1 gm. as compared with dose of 1 gm. twice weekly. Preliminary reports are appearing indicating that in some patients, particularly those with advanced disease, intermittent streptomycin may be less effective than daily administration of 1 gm. of this drug. It may be advisable to give streptomycin in doses of 1 gm. daily for at least 30 days to a patient severely ill on admission before reverting to intermittent therapy. Hypersensitivity to streptomycin occurs occasionally and is manifested by fever, rash and sometimes exfoliative dermatitis. In patients with less severe reactions, desensitization may be accomplished by starting with a very small dose and gradually increasing; with more severe reactions, desensitization may be hazardous and probably should not be attempted. Occasionally, a patient hypersensitive to streptomycin may be able to tolerate dihydrostreptomycin and vice versa.

Aminosalicylic Acid remains an important agent in the antimicrobial therapy of tuberculosis due to its ability to prevent or postpone resistance to streptomycin and INH; and to its ability to enhance the serum levels of active INH. Many forms of this drug are on the market from the acid product to sodium, potassium and calcium salts of the acid, a buffered product, and other forms. The dosage for all of these must be adjusted to the dose of the acid. In other words, 15 gm. of sodium PAS is equivalent to 12 gm. of acid PAS. Many patients will have less gastrointestinal intolerance on some one of these products than on others. There is some difference in blood levels produced with these drugs. Sodium and potassium PAS, being rapidly absorbed, have rapid peaking and falling off of blood levels, while with other forms a more prolonged peak may be attained. The clinical significance of this is undetermined at the present time.

PAS preparations of all types, if stored too long or exposed to undue heat, light or moisture, deteriorate and discolor, resulting in increased intolerance or actual toxicity. PAS should be prepared fresh if given in solution. Under best conditions, side reactions of anorexia, nausea and diarrhea are not uncommon with all forms of PAS, but are not necessarily indications for discontinuing the drug. Occasionally, patients develop more severe reactions, with fever, rash and, rarely, with severe systemic reactions simulating infectious mononucleosis.

PAS alone is relatively not very effective as a treatment for tuberculosis and should always be used in combined therapy. It has been shown recently that PAS, when administered concurrently with INH, will enhance the level of free INH in the serum of patients who rapidly inactivate INH. In Europe intravenous PAS is being used extensively and claims have been made for its value by this route.

The standard dose of PAS in this country is 12 gm. daily in three divided doses, although some studies have indicated that smaller doses of the active substance may well be useful, particularly if full dosage is not tolerated.

Viomycin has a useful though rather limited place in the treatment of the patient whose organisms are resistant to isoniazid and streptomycin and for whom an umbrella is desirable for resectional surgery. The usual dosage is 2 gm. twice weekly for two or three weeks before surgery and eight to ten weeks or more postoperatively. When feasible it should be combined with another drug to which the organisms are sensitive. Renal toxicity precludes the daily use of this drug, but is less evident when used twice weekly.

Pyrazinamide (PZA) is now undergoing clinical investigation by the Veterans Administration-Armed Forces group, the USPHS group, and others, particularly in combinations with isoniazid. It has been found to be effective in combination with INH when administered to patients who have never received either drug before. There is some evidence that this drug may be effective for short periods of 30 to 60 days when used alone, particularly to cover resectional surgery in patients resistant to the other major drugs. In most studies reported there has been a significant factor of toxic effect on the liver; approximately 10 per cent of the patients receiving pyrazinamide have shown abnormal results in liver function studies and about 3 per cent have shown frank jaundice. When this drug is administered, liver function studies should be done periodically to estimate any liver toxicity. Most of the toxic conditions resulting from the use of this drug, however, revert to normal when the drug is withdrawn. PZA should be discontinued promptly if significant disturbance in liver function is noted, and invariably if jaundice appears. At the present time, due to severe toxicity of the drug, it should be administered only to patients in the hospital. This drug is ordinarily administered in dosage of from 30 to 40 mg. per kg. orally, administering no more than 3 gm. daily. Hyperuricemia has been reported in conjunction with the use of PZA.

Cycloserine is a relatively new antibiotic under investigation for use in the treatment of tuberculosis. Preliminary studies have shown that this drug used alone is not as effective in the treatment of tuberculosis as are the various combined drug regimens now in use. At present, studies are in progress to determine the effectiveness of this drug when used in combination with INH. Reports of toxicity, particularly to the nervous system, have continued, such as tremors, drowsiness, convulsions and psychoses. Most investigators originally used this drug in dosage of 1 gm. daily, orally, in divided doses. Newer studies indicate a maintenance of therapeutic effectiveness and nearly complete absence of toxicity when administered in doses of 0.25 gm. twice daily in combination with isoniazid.

Recommended Regimens: Though there is no generally accepted optimum chemotherapy regimen for pulmonary tuberculosis at the present time, recent reports of the Veterans Administration-Armed Forces Group and of U. S. Public Health Service sponsored studies indicate that the following regimens give approximately the same clinical results in most cases of tuberculosis: (1) isoniazid 300 mg. daily plus PAS 12 gm. daily; (2) isoniazid 300 mg. daily plus SM 1 gm. twice weekly, and (3) isoniazid 300 mg. daily plus SM 1 gm. twice weekly plus PAS 12 gm. daily. The Veterans Ad-

ministration and U. S. Public Health Service studies indicate that the regimen of streptomycin 1 gm. twice weekly and PAS 12 gm. daily is not quite the equal of the other three regimens, and that in far advanced disease with large cavities INH-PAS is superior to intermittent SM-INH.

As has been pointed out above, there is increasing evidence that the drug regimens must be individualized in certain patients, particularly in those with more advanced disease, with larger doses of INH and daily SM being administered as indicated.

ACUTE MILIARY TUBERCULOSIS

Isoniazid has proved to be very effective in the treatment of miliary tuberculosis, with survival rates of 90 per cent and higher being reported. Any standard INH-containing combined regimen should be adequate in treating this condition, but due to the serious nature of miliary tuberculosis many still advocate the use of triple drug therapy, with higher dosages of isoniazid such as 10 mg. per kg. per day being used. The drug therapy should be continued for at least 18 months.

TUBERCULOUS MENINGITIS

Reports during the past several years indicate that survival rates of 80 per cent to 90 per cent or higher are possible in tuberculous meningitis when INH, SM and PAS are administered for a minimum of 24 months. The Committee suggests a dosage schedule similar to that for miliary tuberculosis. Intrathecal medication is not recommended. It is of the utmost importance to start the treatment immediately if the history, physical examination or spinal fluid findings strongly suggest a diagnosis of tuberculous meningitis. If the patient's condition does not permit oral medication, the INH and PAS may be given parenterally, initially.

GENITOURINARY TUBERCULOSIS

Genitourinary tuberculosis responds very well to combined drug therapy including INH, SM and PAS in dosage as recommended for pulmonary tuberculosis. The drug should be administered for 18 to 24 months. Recent reports from the Veterans Administration-Armed Forces study indicate that long-term therapy with INH, SM and PAS is very often definitive in such cases and the need for surgical intervention is becoming surprisingly less frequent.

TUBERCULOSIS IN CHILDHOOD

The Committee recommends that all children with active primary tuberculosis receive antimicrobial therapy. The complications, such as miliary and meningeal tuberculosis which sometimes occur in primary disease, have sharply declined since the advent and use of INH. Consideration should be given to the treatment of recent tuberculous converters, particularly in children under

four years of age. In children with active tuberculosis, the physician should always be on the alert for the development of miliary or meningeal tuberculosis. The approximate dosages of the antituberculosis drugs for children are as follows: SM 30 to 40 mg./kg. twice weekly, INH 10 to 16 mg./kg./day and PAS 200 mg./kg./day. Children tolerate higher dosages of INH well and administration of pyridoxin is usually not needed to prevent toxicity.

OTHER FORMS OF TUBERCULOSIS

When the disease involves such organs and tissues as the larynx, mouth, lymph nodes, trachea, bronchi, GI tract and bone, it is best treated by long term combined chemotherapy using one of the regimens recommended for pulmonary tuberculosis.

TUBERCULOUS PLEURISY WITH EFFUSION

This condition should be treated as a case of active pulmonary tuberculosis, with long term continuous combined chemotherapy for a year or more. This recommendation also applies to the so-called idiopathic pleurisy with effusion patients, with a positive Mantoux, even though careful studies fail to reveal presence of tubercle bacilli in the pleural fluid. Experience has shown that in such cases the etiology is usually tuberculous and should be treated as such in order to avoid reactivation later.

STEROID THERAPY IN TUBERCULOSIS

The exact role of cortisone and related compounds in the management of infectious diseases is undefined. However, the greatest difference of opinion regarding the place of steroids exists in the field of tuberculosis. Some have felt that this form of therapy is always contraindicated, while others have recommended its use under certain specific circumstances. Some of the tissue damage and clinical manifestations in tuberculosis are due to an exaggerated interaction between sensitized tissue and tuberculoprotein. Corticosteroids may suppress this overactive defense mechanism, with a resulting decrease in the manifestations of illness. In patients seriously ill with tuberculosis of long duration there is evidence of adrenocortical hypofunction. Steroid therapy used with concomitant antituberculosis chemotherapy often effects striking symptomatic improvement. Thus, without anticipating any change in the ultimate outcome, the use of steroids would appear to be justified, if only for its symptomatic effect, in patients hopelessly ill with advanced tuberculosis. In acute forms of tuberculosis associated with severe clinical illness, steroids may be helpful. This is especially true of miliary and meningeal tuberculosis. In the latter condition, prevention and relief of cerebrospinal fluid block have been attributed to steroids.

REACTION TO PENICILLIN

The number of serious reactions to penicillin has been increasing each year, Dr. Henry Welch, Chief of the Food and Drug Administration's Division of Antibiotics, said in a report before the Fifth Annual Symposium on Antibiotics held recently.

Dr. Welch presented results of a nationwide FDA survey covering a period from the latter part of 1953 to early 1957. He said that isolated reports of penicillin reactions with a relatively high percentage of fatalities have been appearing in the medical literature since 1945. The survey, first nationwide study of reactions to the principal antibiotics, showed a substantially higher number of reactions to penicillin than to other antibiotics.

Dr. Welch pointed out that an estimated 10 percent of the population, or 17 million persons, are prone to become sensitive in some degree to various substances in foods, drugs, and cosmetics. Data are not available on the number of persons receiving penicillin or subject to reactions to the drug. Also, it is not possible, Dr. Welch said, to determine absolutely that an individual will or will not suffer a reaction.

Dr. Welch pointed out that the number of reactions to penicillin is still small when it is considered that millions of persons receive the drug each year and that it has saved tens of thousands of lives. The increased incidence of reactions, he said, is to be expected in the wide use of a highly antigenic substance.

In the survey, 3,419 case histories of severe reactions were collected and classified. Of these, 424 were excluded from the tabulation because of insufficient data.

The FDA survey was a geographic sampling of severe cases handled by over 1,600 private physicians and covered 198,000 of the 685,000 general hospital beds available in this country. It was conducted by inspectors in the agency's 16 districts.

Under criteria established for the survey, severe reactions were classed as (1) life-threatening or (2) not life-threatening. One-third, or 1,070, of the reported reactions to all antibiotics were classed as life-threatening. Nearly two-thirds, or 1,925, were classed as not life-threatening.

In the order of seriousness to the patient, the life-threatening reactions included 809 cases of anaphylactoid shock (an antigen-antibody reaction), 107 superinfections, 70 severe skin reactions, 46 blood dyscrasias (destruction of blood-forming elements), and 38 cases of angioneurotic edema (widespread and serious hives) with respiratory or cerebral involvement.

The great majority, or about 900, of the life-threatening reactions followed the use of penicillin. More than 600 of the most serious reactions—

the anaphylactoid shock cases—resulted from penicillin by intramuscular injection. In 122 of these cases, penicillin was used in combination with streptomycin or dihydrostreptomycin.

There were 72 deaths from anaphylactoid shock, all but one of which followed intramuscular injections. One followed the use of oral chloramphenicol. One death was caused by angioneurotic edema following the use of oral penicillin. Anaphylactoid reactions occurred with about equal frequency in males and females and in all adult age groups. The smallest number of reported anaphylactoid reactions occurred in children 12 years of age and under.

The trend of increase in serious reactions, especially from penicillin given by intramuscular injection, shows there should be a clear-cut indication of need before the drug is administered, Dr. Welch said. The study of case histories indicates that there has not been indiscriminate use of penicillin by physicians, he emphasized.

The survey indicated that the broad spectrum antibiotics, which include the three tetracyclines and chloramphenicol, cause relatively few adverse reactions. However, the tetracycline antibiotics should be used cautiously, particularly for patients undergoing abdominal surgery, Dr. Welch said. The possibility of staphylococcal enterocolitis should be kept in mind when these drugs are given, he added.

FDA officials said that copies of the complete report on serious reactions to antibiotics will be made available to the medical profession.

SECTIONAL MEETING AMERICAN COLLEGE OF SURGEONS

All members of the medical profession are invited to attend a three-day Sectional Meeting of the American College of Surgeons in Jackson, Mississippi, January 16 through 18, at the Hotel Heidelberg.

Topics will include Complications of Abdominal Surgery, Chemotherapy, Metastasis and Limitations of Surgery for Cancer, Common Errors in Management of Fractures, Pediatric Surgery, Management of Multiple Injuries, New Horizons in Cardiac and Lung Surgery, Nutrition Therapy and Transfusions. Medical motion pictures will be shown each day.

NEW ORLEANS GRADUATE MEDICAL ASSEMBLY

The twenty-first annual meeting of the New Orleans Graduate Medical Assembly will be held March 3, 4, 5 and 6, 1958, headquarters at the Roosevelt Hotel.

Eighteen outstanding guest speakers will participate and their presentations will be of interest

to both specialists and general practitioners. The program will include fifty-four informative discussions on many topics of current medical interest, in addition to clinicopathologic conferences, symposia, medical motion pictures, round-table luncheons and technical exhibits.

The Assembly has been officially approved for Category I by the Commission on Education of the American Academy of General Practice. Thirty hours of formal credit will be allowed for attendance at this meeting.

Following the meeting in New Orleans, arrangements have been made for a postclinical tour to Mexico City, Cuernavaca, Taxco and Acapulco, leaving from New Orleans on Friday, March 7 and returning on Tuesday, March 18.

Details of the New Orleans meeting and the postclinical tour are available at the office of the Assembly, Room 103, 1430 Tulane Avenue, New Orleans 12, Louisiana.

Warfarin Called Nearly Ideal Anticoagulant—A new synthetic drug, Warfarin (Coumadin) sodium, comes closer to being an "ideal" anticoagulant than any other drug now available, two groups of researchers reported recently.

Anticoagulant drugs are used to prevent death-dealing blood clots in heart attacks and some kinds of circulatory diseases by depressing the blood's ability to clot.

Warfarin has a faster and more-lasting effect and produces fewer harmful side effects than other anticoagulants, the two groups reported in separate articles in the November 16 Journal of the American Medical Association.

Warfarin is unique because it is effective when given orally, intravenously, intramuscularly, or rectally, according to Drs. Shepard Shapiro and Flavio E. Ciferri, New York City. Other anticoagulants are effective only when given orally.

The fact that it is effective when given by injection is especially important for those persons who cannot swallow pills because of heavy sedation, shock, nausea and vomiting, or other reasons.

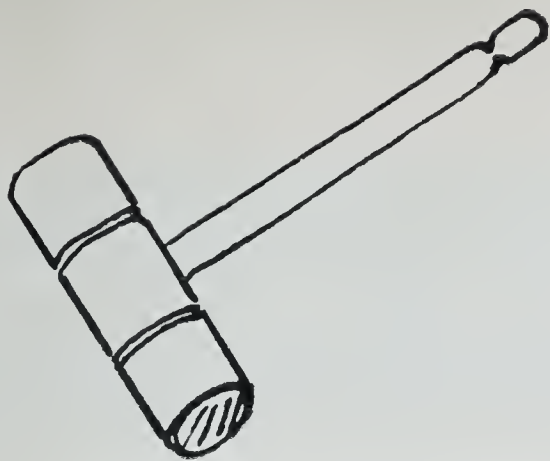
Drs. Shapiro and Ciferri found that a single muscular injection provided an effect that lasted for as long as five days, with the peak effect on the second or third day after injection.

Drs. Rudolph E. Fremont and Benjamin Jagendorf, Brooklyn, N. Y., gave the drug in tablet form to 85 patients at Brooklyn Veterans Administration Hospital. The patients had suffered heart attacks or blood clots in the vessels.

They found that Warfarin produced a fairly prompt reaction in the patients, as well as "relatively well-predictable and consistent" effects for longer periods of time. They found little need to manipulate the dosage after the initial need was established in the patient.

Warfarin rarely caused excessive depression of the ability of the blood to clot, with resultant hemorrhage—one of the problems encountered in some of the other anticoagulants. Excessive depression was quickly counteracted by administration of vitamin K.

The authors also pointed out that Warfarin does not produce any known harmful effects on the body.



President's Page

WHAT IS YOUR DECISION?

The special election called for December 17 to vote on amendments passed by the last legislature is of particular interest to the members of the Medical Association of the State of Alabama. Several of these amendments have to do with medical education and health problems. Amendment No. 4, if passed, will probably be the greatest asset to the Medical College of Alabama since its organization. Each member of our Association should be thoroughly conversant with all of these amendments and actively support those offering more and better medical facilities in this state.

The officers of your Association are on the mailing list of the A. M. A.'s Secretary's Letter, the Washington Office Letter, Federal Medical Services Newsletter, the Association of American Physicians and Surgeons "News Letter" and many others. The problems confronting Medicine are summarized each week. Since we are making decisions, I will mention some recent problems discussed in the above communications as each of us must decide where we will make our stand.

1. Social Security—Is Social Security insurance or a "relief?" Are Social Security payments premiums or taxes? Is Social Security an earned right or gratuity?

Title II of the 1935 Social Security Act provided for a modest annuity on retirement at 65 at a cost of 2% of covered wages up to \$3000 a year, 1% paid by the worker and 1% by the employer. Congress intended a degree of actuarial soundness. One extremely important difference between the first Social Security and legitimate insurance was that the captive participants in Social Security had no contract with the government and subsequently no vested rights. Section 1104 gave Congress the right to alter the act at its discretion. The participants still have no rights today.

The report of the House Subcommittee on Ways and Means entitled "Social Security After 18 Years" released December 1954 brings up questions of financial soundness. Some authorities claim it is actuarially unsound and will go "broke." The tax rate is going up. The "Trust Fund" is composed mostly of special treasury certificates and comparatively little cash. How will future obligations be met? If you favor Social Security would you in effect be favoring Socialized Medicine?

2. Veteran's Administration Facilities—V. A. statistics as of July 31, 1957:

Veterans in civil life 22,511,000 (Korean Veterans 5,122,000, World War I and II 17,389,000).

Average daily patient load 112,499.

Eligible hospitalization applicants awaiting admission 22,188.

The present policy is that if a non-service connected veteran needs hospitalization and cannot pay he will be taken in if extra beds are available. On any given day, of the 100,000 patients in V. A. hospitals, over 1/3 will be service connected and 2/3 non-service connected. There has been no need for extra beds for service connected disability cases for 20 years. The fundamental question to be answered: Is it the will of Congress and the American people that beds be built for non-service connected veterans?

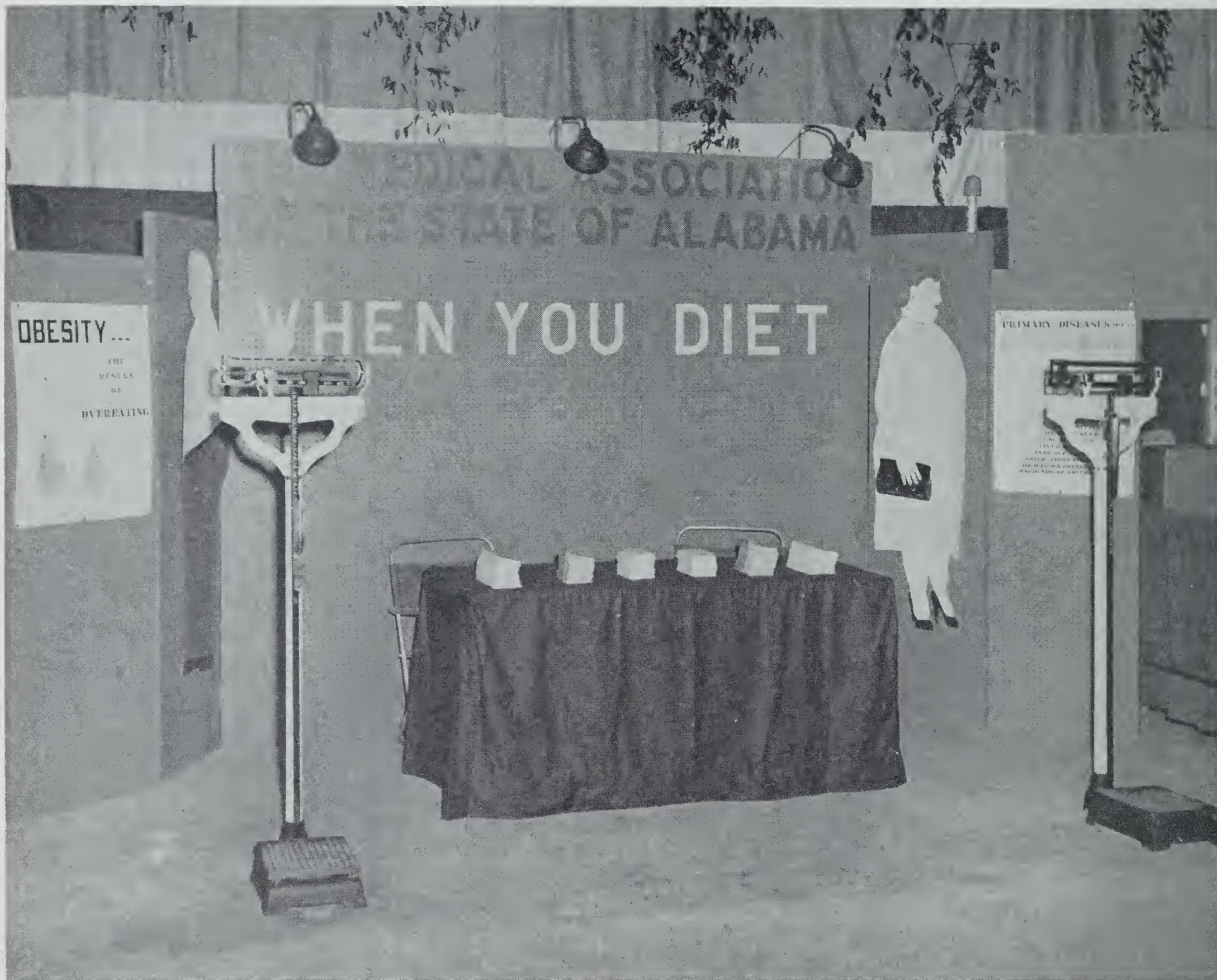
3. Welfare Policy—One paragraph in the summary in a valuable document on welfare policy entitled "Underwriting Canadian Health—An Economic View on Welfare Programs," follows: "A possible conflict between two desirable social objectives (wealth and welfare) obviously poses difficult problems of choice. . . . The main conflict posed by these two objectives is that an excessive concern with welfare expenditure may stunt the wealth creating capacity of the community. On the one hand, taxes beyond a certain level tend to dry up sources of saving and investment and reduce incentives to strive for higher personal income, particularly at the executive level. On the expenditure side, the expansion of welfare benefits tends to narrow the scope of personal responsibility and dull incentives for personal advancement on the part of recipients. When welfare policy comes to have precedence over policies aimed at higher national productivity and output, the society concerned may be thought of as trying to eat its cake before it has it. Wealth must therefore come before welfare because in the long run it is productivity and not the degree to which income redistribution is arranged by legislation that determines real income."

I will ask an answer to more of these problems in future issues of the Journal.



ORGANIZATION SECTION

A REPORT FROM THE COMMITTEE ON PUBLIC RELATIONS



That time of the year when everyone delights in eating cotton candy and participating in the gala activities offered by "The Fair" has once again come and gone; and with it the 1957 Medical Association's exhibit is history.

As shown in the above picture, the general theme was "Dieting." The arrangement of the exhibit was such that, as viewers passed, they could be weighed on either of two physician's scales. After getting their correct weight, they were handed three pamphlets, one of which consisted of

a weight chart and a one-day case history (slightly exaggerated) in the life of an obese person. The other pamphlets were entitled "When You Diet," and "M A S A." The former consisted of enumerated diseases caused by being overweight, calories needed to remain healthy, the amount of weight one should lose and warning against reducing fads. The latter is concerned primarily with the history and purpose of the Medical Association, its organization, etc.

Judging by the number of pamphlets distributed

during the fairs in Birmingham, Montgomery and Mobile, between 9,000 and 10,000 persons were weighed, which means that some 27,000 to 30,000 pieces of literature were handed out. Occasionally literature was taken and that particular person, for one reason or another, did not venture to step upon the scales. However, others weighed but refused the pamphlets.

It is felt that the exhibit was successful from all viewpoints and that great strides forward were accomplished public relations-wise.

A reprint of two of the pamphlets follows. Copies may be secured from the central office.

WHEN YOU DIET

DISEASES CAUSED BY OVERWEIGHT

It has been said that people just don't up and die; they kill themselves by neglecting their health. This axiom could well apply to those persons who are overweight. It has been medically proved that people who are overweight may develop such disorders as heart disease, diabetes, high blood pressure, gout, lung disorder, hardening of the arteries, cancer, liver diseases, varicose veins, gallbladder disease, bronchitis, etc.; not to mention the fact that a fat person is a poor surgical risk, and that stout women are more apt to develop complications during pregnancy.

HOW MANY CALORIES DO I NEED?

Nutrition experts agree that from 2,000 to 3,500 calories should be taken into the body daily to maintain a normal body balance as shown by a constant weight. Consequently, the degree to which a person is obese depends entirely on the number of excess calories consumed since birth. Roughly, it takes 3,500 calories to form one pound of body fat. That means that each pound of excess weight takes an additional 3,500 calories. For example, if a person is twenty-five pounds overweight, then he has taken into his body a total of 87,500 calories above that which he has burned up. Your weight will remain practically the same as long as food intake equals energy output; but it will most assuredly increase when the food intake is greater than energy expenditures.

HOW MUCH WEIGHT SHOULD I LOSE?

At one time or another, almost every obese person has tried to bring his weight under control. Care should be taken in planning your diet. It is certainly proper to diet provided you do so under the supervision of your family doctor. However, it is important that the proper vitamins and minerals be taken into the body each day. So that you will be sure of getting the proper number of vitamins and minerals, it is wise to ask your family physician to give you a reducing diet. If you lose too much weight suddenly, it may do more harm than good. It is recommended that you lose no more than four to six pounds a month for health's sake.

If you feel that you should diet, consult your family doctor and ask him to give you a thorough physical examination to determine the extent to which you should lose weight. He is the one to decide whether your body properly assimilates the food listed in your program for good health. He may give you a reducing diet to help you lose weight safely and sensibly.

Successful appetite control begins in the supermarket. When your doctor gives you a reducing diet, then you should follow that diet, resisting the temptation to buy

high calorie snacks. Then you will be well on the road to successful weight reduction. Remember, it's up to you to reduce. The doctor can merely suggest the proper and safe way to do so. For health's sake, eat to live. Don't live to eat.

REDUCING FADS

On the front cover of this pamphlet you will find listed some of the well known fads of today regarding weight reduction. These may be extremely harmful to your health and should be avoided since a sudden change in fat deposits in the body may affect the ability of the heart to adjust and function properly.

Once you have reached the desired weight, see your doctor at regular intervals for a physical examination and ask him to prepare a list of the proper foods you should eat to remain at the proper weight in order to stay healthy.

To reduce safely you must eat less. No easy way is safe. No safe way is easy.

I ASKED MY DOCTOR HOW TO LOSE WEIGHT

Miss Obesity tipped the scales at 273 pounds. Many times she had tried to reduce but she was never able to accomplish the desired results. She just couldn't figure it out.

A ROUTINE DAY

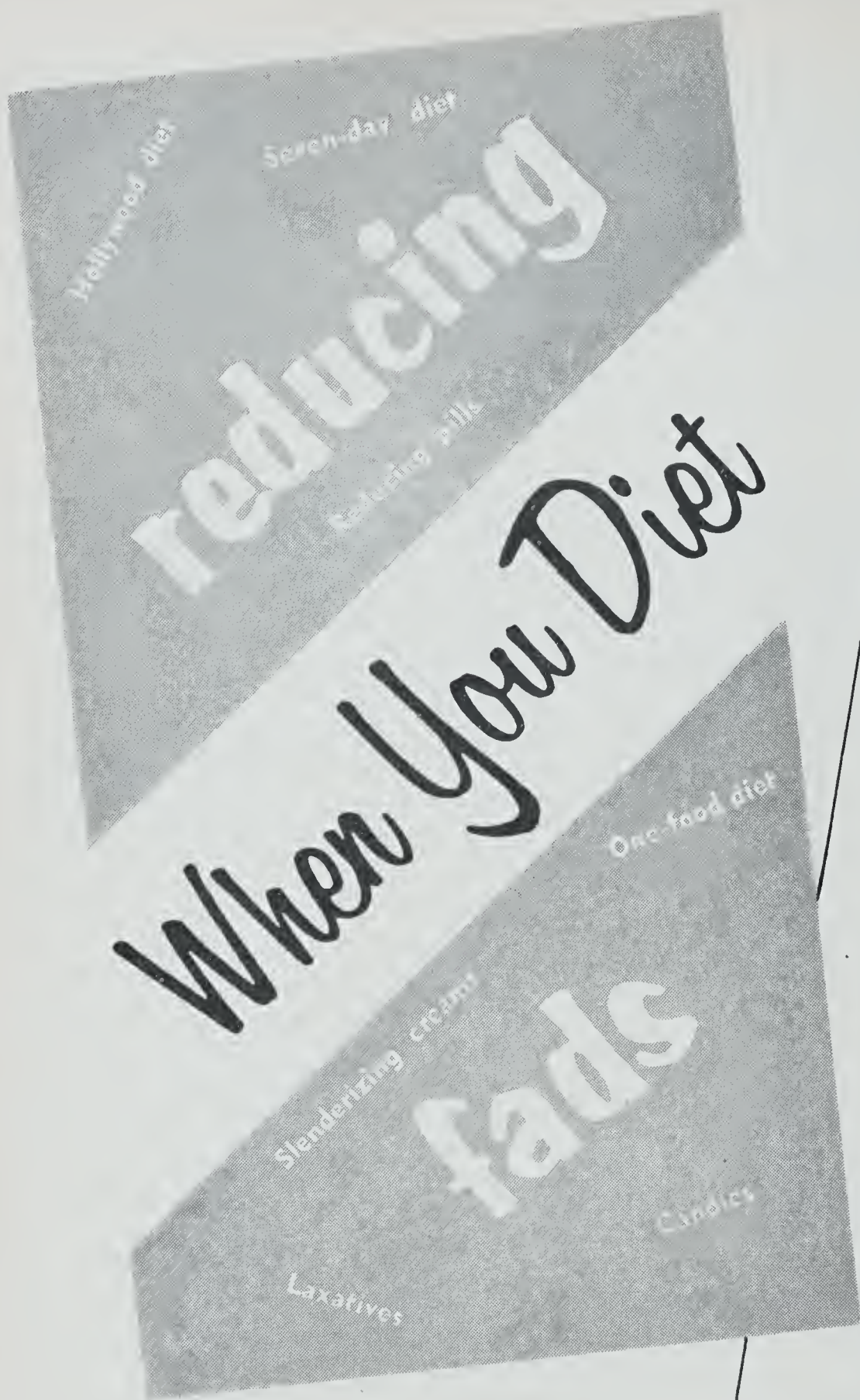
A routine day for Miss Obesity began with breakfast at 6:00. Her breakfast usually consisted of three strips of bacon, two fried eggs, two medium waffles, three slices of bread, two glasses of milk, and butter and jelly.

Since Miss Obesity got up rather early, she always took a little nap after breakfast, usually awakening about 8 A. M. By this time she needed a bit of something to chew on so she reached for the graham crackers. She munched on these for a while, then suddenly realized that she had forgotten to eat her corn flakes at breakfast; so she immediately ate two helpings of her favorite cereal. By this time, it was 8:30 and she turned on the TV to watch her number one program. Naturally, she couldn't sit through that long program without something to eat, so she went to the kitchen and returned with a half dozen doughnuts and a cup of coffee with cream and sugar.

At 9:30 it was time to go to the grocery store since she had planned to enjoy a square meal at lunch as she did everyday. She returned from the four-block walk to the grocery store at 10:15, but not until she had stopped by the corner drug store for that daily malted milk. Back at home, it being too early for lunch, she decided to watch TV again which called for another snack. This time it was an average size sandwich and a soft drink.

She watched TV until 11:30; then decided it was time to prepare lunch. For the next hour she was as busy as a bee preparing the potatoes, ham, spaghetti, prunes, bread, mincemeat pie, etc. Immediately following lunch, that tired feeling was present again so she took her afternoon nap. At 3 P. M. she roused long enough to grab another sandwich and a glass of milk, then continued her "beauty" sleep. At 4:30 she was wide awake. It was then time for that ice cream soda and so it was to the corner drug store again.

After the soda she hurried home in order not to miss her favorite afternoon TV show. Soon she was back in the kitchen preparing dinner. After a hearty dinner—yep—right back to the TV. She managed to endure for an hour without eating but then she felt that craving coming on. This time it was a pound box of chocolates which she consumed with a sniff.



I Asked My Doctor
HOW TO LOSE WEIGHT



**M
A
S
A**



ANOTHER SERVICE

ORGANIZATION SECTION

After the last TV performance of the evening she made the last icebox raid before retiring.

THE GREAT AWAKENING

Miss Obesity suddenly realized that life for her was very dull. All she did was eat, sleep and watch TV. She was losing out on all the fun in life. She decided she must do something—but what? She had already tried to reduce by violent exercise, massage, pills, etc., and found them useless as well as dangerous. Then she decided that there was only one thing to do—visit her family doctor. He emphasized that overweight in almost every case is simply the result of eating more than the body can burn in energy. Then he prescribed a reducing diet for Miss Obesity and she found that it included many foods that she was already eating. He included a well rounded diet with all the minerals and vitamins which are essential to good health.

THE NEW LOOK

Finally, Miss Obesity was down to a desired weight and in on all the good times. She now eats only enough calories to keep her healthy and avoids those hidden calories in gravies, cream, sauces and other extras. Instead of watching TV all day, she gets plenty of exercise in order to use up those excess calories.

Miss Obesity was wise in consulting her family physician for only he is in a position to supervise a reducing program. If you are overweight and feel that you should reduce, then visit your family doctor and let him give you a physical examination and decide to what extent you should lose weight. He can help you lose weight and, by so doing, lengthen your life.

Your present weight is.....lbs.

Compare this with your best weight as shown on the Metropolitan Life Insurance Co. chart below.

Average Weight, Age 1-17 Years		
Age	Boys	Girls
1	21	20
2	26	25
3	31	30
4	34	33
5	39	38
6	46	45
7	51	49
8	57	56
9	63	62
10	69	69
11	77	77
12	83	86
13	92	98
14	107	107
15*	116	115
16*	128	118
17*	134	118

*Weight at ages 15, 16, and 17 is extremely variable.

“Ideal” Weight for Men, Age 25 and Over				
Height Feet Inches		Small Frame	Medium Frame	Large Frame
5	2	116-125	124-133	131-142
5	3	119-128	127-136	133-144
5	4	122-132	130-140	137-149
5	5	126-136	134-144	141-153
5	6	129-139	137-147	145-157
5	7	133-143	141-151	149-162
5	8	136-147	145-156	153-166

5	9	140-151	149-160	157-170
5	10	144-155	153-164	161-175
5	11	148-159	157-168	165-180
6	0	152-164	161-173	169-185
6	1	157-169	166-178	174-190
6	2	163-175	171-184	179-196
6	3	168-180	176-189	184-202

“Ideal” Weight for Women, Age 25 and Over

5	0	105-113	112-120	119-129
5	1	107-115	114-122	121-131
5	2	110-118	117-125	124-135
5	3	113-121	120-128	127-138
5	4	116-125	124-132	131-142
5	5	119-128	127-135	133-145
5	6	123-132	130-140	138-150
5	7	126-136	134-144	142-154
5	8	129-139	137-147	145-158
5	9	133-143	141-151	149-162
5	10	136-147	145-155	152-166
5	11	139-150	148-158	155-169
6	0	141-153	151-163	160-174

For ages 18 to 25 subtract 1.0 lb. for each year of age less than 25 years.

Everyone is different from everyone else; so no scale such as the one above fits everybody’s situation. However, if you vary as much as ten to fifteen pounds from the listed proper weight, it is suggested that you see your family physician.

Another Public Service of
The Committee on Public Relations
of
The Medical Association of the State of Alabama

ASSOCIATION BRIEFS

The following committees have held fall meetings: Committee on Emergency Medical Service, Committee on Insurance, Committee on Cancer Control, Committee on Legislation, and Committee on Medical Education and Hospitals.

* * *

A letter from the Committee on A. M. E. F. has been sent to all members. Contributions should be returned immediately.

* * *

National and regional meetings at which the Association was represented:

Dr. J. Mac Barnes attended the Regional Meeting of the American Medical Association on Emergency Medical Service.

Dr. J. R. Jarvis represented the State Association at the National Annual Conference on Mental Health at Chicago, November 22-23.

Heart disease is apparently more prevalent among women than men, Health Information Foundation points out—but it causes 75 per cent more deaths among the males in this country. One possible explanation of the excess male mortality: Men are thought to be particularly subject and vulnerable to the strains and pressures of modern life.

Since 1900 heart disease has become more than ever a disease of middle and old age, according to the Foundation. Today about 70 per cent of all deaths from this disease take place at ages 65 and over, and another 25 per cent between the ages of 45 and 64.



ASSOCIATION FORUM

PUBLIC ASSISTANCE PROGRAMS

(This is a special report from the Washington Office of the American Medical Association, which came out over the name of Thomas H. Alphin, M. D., Director.)

In the old days, now all but forgotten, public assistance probably was not too efficient and sometimes it was erratic. But it was a simple operation. The local community was expected to take care of the food, clothing and housing needs of its own poor. The doctors and the hospitals undertook to give them medical care for nothing, or at most for a token charge. The doctors were little concerned about the political ramifications of public assistance, nor were others who helped out the indigent families. Over the years the picture has changed vastly. In 1936 the Federal government started passing out money to the states with the stipulation that the states add money of their own and use it to support certain categories of the indigent. Since that time, the U. S. contribution for public assistance has increased about 700%. With this growth in public assistance payments, there has been, particularly since 1950, a parallel growth in public payments for the medical care of the indigent. At present public assistance money intended for medical care—for physicians, hospitals, nurses, dentists, druggists—probably totals well over half a billion dollars a year, when state, federal and local contributions are all considered. This phenomenal medical-social-economic-political development is having and will have repercussions on medical practice, for good or bad. To help you understand what is taking place, we have compiled this *Special Report*. We have tried to keep this as uncomplicated as possible, yet to give you essential information. The American Medical Association, through studies over the years, has established principles covering medical care of the indigent. The Council on Medical Service has been concerned with the problem, and has kept in close touch with developments through studies and conferences with the federal officials involved. For further information in this field write to the Council at AMA Chicago headquarters.

PRESENT EXTENT OF FEDERAL-STATE PUBLIC ASSISTANCE PROGRAMS

Employment in the United States is now at a

level even visionaries couldn't have dreamed of a few years ago—more than 67 million people in jobs. Also, 10,450,000 persons are receiving Old Age and Survivors Insurance under Social Security, and industrial pension funds have about \$16 billion on hand to pass out to workers when they reach retirement age. Insured pension funds account for another \$12 billion. Yet more than 5,000,000 persons currently are receiving public assistance checks monthly from funds supplied jointly by the U. S. and states, and probably another half million are on local or state relief rolls. The U. S. got into this activity in 1936, when the country was still trying to shake off the depression. If the states would themselves contribute specific percentages for the purposes, the U. S. agreed to allocate money for the assistance of four classes of indigent—those past 65 years of age, the blind, the totally and permanently disabled, and dependent children and their guardians. (U. S. aid is still limited to these groups.) In 1936 the U. S. contributed \$209 million for the use of these people. For the current fiscal year the U. S. is giving the states \$1.6 billion for these programs, a 700% increase in 20 years. At the same time the states have increased their payments to \$1.4 billion, for a total of \$3 billion to maintain approximately 5.1 million persons on various forms of public assistance. As we shall see later, a growing proportion of this money is designated exclusively to pay for medical care.

HOW FEDERAL PUBLIC ASSISTANCE PROGRAM HAS BEEN LIBERALIZED

Before the U. S. moved into the picture, and for some time after, the relatively few relief dollars available for the many persons in need meant that money was spent only for food, clothing, shelter. As for many years past, the medical profession generally assumed the major obligation of providing services to the needy sick without charge. This was the philosophy and quite often the practice in public assistance even between 1936 and 1950, during which all payments for relief were made directly to the recipients themselves, as required by federal law. In 1950 Congress changed the law to improve the medical care of the indigent. The new law permitted the states to set up pools of re-

lief money, from which payments could be made to the vendors of medical care for the treatment of public assistance recipients. (Physicians, hospitals, dentists, nurses, nursing homes, druggists are identified as the "vendors" of medical care.) In 1950, it was estimated that \$300 million was being spent annually (by U. S., states and communities) for medical care for relief recipients. About a third of the states decided to take advantage of the new 1950 law and set up "pooled funds" to pay the vendors directly.

In 1956, Congress decided on another change. It authorized payment to states of \$3 per month for each adult on public assistance and \$1.50 for each child (to be matched equally by the states), for medical care. But states could no longer make vendor payments within the \$60 individual monthly maximum on assistance payments, something that was permitted under the 1950 legislation. Among the 20 or so states that between 1950 and 1956 had adopted the pooling or vendor payment system were a few that actually would lose federal medical care money when the new law went into effect. In response to complaints from these states, Congress again changed the law in 1957. Under this most recent change, states are permitted to make an annual choice between continued use of pooled funds for payments to vendors under the 1950 system or to adopt the new 1956 vendor system with its \$3 and \$1.50 per month U. S. contribution. At the same time, they may continue recipient medical care payments under either system, that is, giving money directly to individuals who are expected to assume responsibility for paying their own doctor and hospital bills.

MOST OF STATES APPLY FOR ADDITIONAL
U. S. MONEY UNDER NEW PLAN

How are states reacting to this new offer of more federal money for medical care of the indigent? According to officials of the Federal Bureau of Public Assistance, indications are that only eight or nine states will not embark on the new program at this time. *Maryland* may turn out to be a notable exception. In preliminary conferences, doctors there informed state officials that they would cut their fees for indigent cases if this action would forestall the application for more federal money.

Bureau of Public Assistance officials furnished the following cross-section picture of how a number of states are handling the situation:

Vermont, which at present is not authorized by law to accept U. S. money and set up federal-state medical care programs for the indigent, earmarks \$5 per month per case for medical care, if it is needed, the money going directly to the individual involved. However, a movement is under way to change the state law so a vendor payment program can be set up under the new plan. *New*

Hampshire is pooling its medical care funds, and spends far more than most states for this purpose, setting aside \$15 per month for aged, \$13.50 for dependent children, \$11 for the blind and \$30 for permanently and totally disabled. When an individual needs medical care, money may be spent out of this fund without limit, going directly to the doctor, the hospital, the druggist, the nursing home. New Hampshire intends to retain the 1950 vendor system for the aged and the permanently and totally disabled, but to give medical care to dependent children and the blind by means of the new federal program. *Florida's* doctors decided they wanted to continue the tradition of providing free medical service to public assistance recipients, so all U. S. money available will go to other vendors of medical care. *Colorado*, in caring for dependent children and the blind, uses its own and federal money to buy from Blue Cross and Blue Shield rather complete medical coverage at a premium of about \$4 per month to Blue Cross and \$1.45 to Blue Shield. *Kentucky* and *Utah* are spreading their limited funds thin, all the way across the medical care spectrum, by limiting the number of doctor calls, number of days in the hospital, and the money that can be spent on drugs. *Missouri* is staying with one system; all money goes to individuals, none to doctors or other vendors. *Nevada* has taken opposite direction; all of its available U. S. and state funds will be used to pay vendors for drugs and out-patient medical care. If Nevada's funds are exhausted during the year, the doctors have agreed to waive their fees or pro rate them. *Illinois* will take advantage of the 1950 vendor arrangement for its aged, because it has an extensive medical program for them and for the disabled (\$42 per month for disabled alone), and *Ohio* will keep the 1950 vendor system for its dependent children.

Obviously, there is little uniformity at this experimental stage of the search for the most economical and efficient way to provide medical care for public assistance cases. Federal officials, carefully observing what is going on, raise a few warning signs. They think that where funds are used to provide only one facet of care, such as nursing home, all recipients will wind up in nursing homes and may not receive proper medical attention. Some also are skeptical of a program limited to Blue Cross-Blue Shield hospital care; most recipients, notably the aged, need maintenance care with frequent home and office calls more than they need hospitalization.

THE CHANGING PICTURE: MEDICAL CARE
PERCENTAGE TO INCREASE

The states' interest in obtaining more U. S. money for public assistance cases by turning to vendor payments is bringing about new patterns in health care for the indigent. In many states

care for the indigent up to now has been a county responsibility. In others, particularly New England, it is the responsibility of cities and towns. In these situations, the counties and communities are forbidden by state law to accept federal money to help in the medical care of indigents. As a result, many state legislatures are moving to change state constitutions to make it possible for counties and communities to (a) accept federal and state money for this purpose and (b) participate in pooled vendor-plan arrangements. Thus in these areas the tendency is for the management and financing of medical care for the indigent to leave the local level and move to the state level.

Another change of deep significance to the medical profession also is taking place. In the early years of organized relief, as has been noted, the limited money available for public assistance had to be spread over many families, leaving them only enough for food, clothing, housing. Their medical care was largely a local, private charity proposition, with the doctors and the hospitals giving a great deal of service without pay. Over the years, with the expansion of social security and the growth of industrial and private retirement plans, more and more of the necessities of life are being supplied low-income groups from sources other than public assistance. As a consequence, more and more public assistance money is being released for medical care, something that few public welfare agencies could afford to supply in earlier days. For a specific example, in two large states 10 years ago only 6% of the total welfare dollars was spent on medical care. Today the proportion is 35%, and welfare directors of these states estimate that in another 10 years the proportion will rise to 50%. The explanation is just this: security and retirement programs, public and private, are underwriting the public's income to such an extent that the share of public assistance money that can be set aside specifically for medical care is growing at a rapid rate. This is evidence that the public assistance programs are increasingly directed toward the benefit of the aged, the sick and the disabled.

HEALTH INSURANCE BENEFITS

(The Health Insurance Institute is the central source of information for the nation's insurance companies serving the public through voluntary health insurance. Following is a report made by the Institute covering a survey of health insurance benefits for the first nine months of 1957.)

Benefit payments to Americans covered by voluntary health insurance through insurance company policies were 15% higher during the first nine months of 1957 than for the same period the year before. Reports from the nation's insurance companies showed that from January 1 through

September 30, 1957, an estimated \$1.8 billion had been paid to help pay hospital and doctor bills and to replace income lost because of accident or sickness.

Benefits paid under group health insurance policies covering hospital, surgical and medical care and loss of income totaled \$1.3 billion by the end of the third quarter, an increase of 20% over the same period for 1956, while the rise in benefits under individual and family type policies was over \$469 million, an increase of 4%.

Persons covered under hospital expense policies, which help pay for the costs of hospital care, received a total of \$748 million, with \$578 million received through group policies, and \$170 million under individual insurance policies.

Surgical expense insurance, which helps reimburse the insured for operations, accounted for \$299 million in benefit payments, with \$241 million going to those protected under group policies, and \$58 million paid to individual policyholders.

Payments by insurance companies to persons covered by medical expense policies, which help pay for medical care and treatment other than surgery, amounted to \$53 million by September 30. Of this total, \$45 million was paid out under group plans, and \$8 million through individual policies.

Major medical expense insurance, which helps defray the cost of serious, or catastrophic illness, paid holders of such policies a total of almost \$85 million in benefits, with group policyholders receiving some \$81 million, and holders of individual policies receiving over \$3 million. These figures include policies written alone or to supplement the basic hospital, surgical and medical coverages.

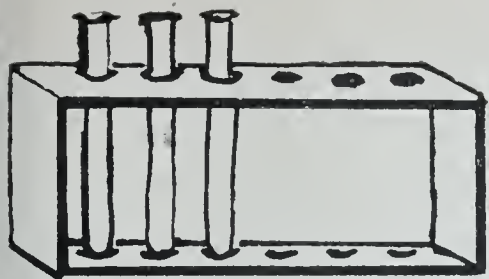
It is also noted that persons insured against loss of income due to sickness or disability received an estimated \$545 million as income replacement, with \$355 million received through group policies, and \$190 million under individual policies.

The increase in such payments to the American people reflects the continued efforts by the public to pay its hospital and doctor bills through voluntary health insurance.

If 1915 mortality rates had prevailed last year, Health Information Foundation points out, an additional 300,000 of the four million babies born alive would not have lived to celebrate their first birthday.

Forty years ago one in every ten babies born alive in this country was unable to survive the first year of life. Today the ratio has dropped to one in forty.

Once an infant has survived the dangerous first week of life, reports the Foundation, the chances are nearly 100 to 1 that he will live to see his first birthday.



STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.

State Health Officer

YESTERDAY'S MAN OF PROVIDENCE AND YOUR HEALTH TODAY

Charles V. Chapin. Does that name sound familiar to you? Perhaps not; undoubtedly, many hundreds, indeed thousands or even millions of people, have never heard of him. And yet, the important work he did during his lifetime abides today to benefit all of us. In fact, it is perhaps safe to say that the lives of people yet unborn will be influenced by his contributions to society.

Who was this man, this Charles V. Chapin, and why does his importance live on after him? He has rightly been called one of America's foremost health heroes. High on the list of his achievements were his realistic teachings in public health. Although you may not have heard of him, most of Alabama's public health workers and those elsewhere, for that matter, know the name of Chapin. For it was he who pointed the way to many of the scientific and realistic practices in force now, the practices which mean vastly improved health for Alabamians, for those in other states and in other nations as well.

The life and work of this man, born January 17, 1856, in Providence, Rhode Island, was to be synonymous with his middle family name, Value. And the key to his valuable contribution was his approach to his work.

Charles Value Chapin simply refused to accept the belief that the current way of promoting and maintaining health was necessarily the best way. He was a firm believer in applying scientific methods to health work. But in his own writings, he expressed its limitations in this way: "The methods of science when applied to the problems of life rarely discover the exact truth and the whole truth. Scientific knowledge is a growing plant. New shoots are continually budding from the old. Rarely does it need pruning and its solid branches shall never be cut away."

At the same time, he did not overlook the human values at stake in all health work. At the fiftieth anniversary celebration of the American Public Health Association in 1921, he said: "Figures do not measure the terror of epidemics, nor the tears of the mother at her baby's grave, nor the sorrow of the widow whose helpmate has been

snatched away in the prime of life. To have prevented these not once, but a million times, justifies our half century of public health work."

And so, for almost a half century, for 48 years to be exact, Dr. Chapin was himself on public health's front line, as superintendent of health in Providence, Rhode Island—his birthplace and hometown. There, his energies were devoted to searching studies of diseases' onset and spread, as well as other pressing problems of the day. And as he questioned the apparent, he gained new facts. These facts, in turn, and his eloquent advocacy of them, forced many of the current routines, the health precedents that many people clung to vigorously, out of the public health picture, and in their place came better ways of fighting off attacks by disease enemies.

The individual today can scarcely appreciate Dr. Chapin's contributions without some knowledge of conditions in those earlier years when he did his work. Not much information is available concerning Chapin's early life. At the age of 20, he was graduated from Brown University, also in Providence. The year was 1876, the same time that Louis Pasteur began studying the anthrax organism in France. Out of this work was to come the germ theory of disease, which was to revolutionize the whole field of public health.

From Providence, Chapin went to New York where he enrolled in Bellevue Hospital Medical College, which is now the medical school of New York University. He was awarded the degree of doctor of medicine in 1879, and interned in the hospital the following year.

Perhaps the teacher who exerted the greatest influence on the young Dr. Chapin was Dr. Edward G. Janeway. He was professor of medicine and a member of the hospital's visiting staff. Also, he had only recently served as a member of the New York City Board of Health. And Chapin's interest was caught and held by Dr. Janeway's discussions, on ward rounds in the hospital, on the possible ways to control contagious diseases in the community. The discussions were based on Pasteur's germ theory of disease transmission which Dr. Janeway believed to be sound.

Not much is known of Chapin's life in the next four years. But by 1884 he was back in Providence. He was offered the post of superintendent of health, and he accepted, obviously eager to try

out Pasteur's theories to safeguard the town's health. Then, four years later, he was named to a second post—city registrar of vital statistics. He remained in both jobs until 1932. This long tenure in office is itself a significant achievement, especially in those early years. For this was a time when changes in city government groups, from one political party to another, frequently meant a change in health officers, as well.

When Dr. Chapin took over in Providence, the health department there, as in other places, was engaged in a variety of practices designed to prevent disease. Health workers were kept busy isolating contagious disease promptly, examining school children, recording births and deaths, distributing milk for babies, vaccinating, running laboratory tests and distributing circulars containing health information.

Moreover, a good part of the department's time was devoted to fumigation of households following disease attacks. This terminal disinfection of premises had a firm foothold as an official health practice in most if not every part of the United States. People still believed that the agents of disease lingered in the air and on various objects, waiting to pounce on their next victims. The germ of a disease, for instance, was believed to become attached to material things, such as clothing, books, toys, furniture and even the walls of the room where the sick person lay in bed. And this, according to current thought, was the way in which disease was most often spread from one person to another. Thus, when a person died from a contagious disease, only members of his family could attend the funeral. Others were barred, on the theory that germs from the dead person filled the air and would attack others.

Official fumigation by health departments cost a lot of money, but it was being continued because most people and many health officials took for granted that it was preventing the spread of disease. But the man of Providence did not take it for granted. Although he did not deny that some cases of disease might be caused by contaminated objects, he maintained that the chief explanation for disease transmission must be sought elsewhere. There was little doubt in his mind that terminal disinfection had its origin in earlier days when disease was believed to be the work of demons, and that there was no scientific justification for it.

Thus, by 1905, Dr. Chapin had assembled the evidence that could not be denied. And, in 1906, he read his paper, "The Fetich of Disinfection," containing the evidence to a section of the American Medical Association. The editor of the book, *Papers of Charles V. Chapin, M. D.: A Review of Public Health Realities* (1934, The Commonwealth Fund), tells us that only one of the 37 persons

present agreed with Chapin's proposal to discontinue fumigation. Further, he tells us the later publication of the paper caused a sensation.

Nevertheless, health officials began studying Dr. Chapin's assembled facts. And within a few years, fumigation as a means of disinfection was being abandoned in some of the larger cities, in Boston, Baltimore and New York.

Dr. Chapin's evidence pointed to people, and not things, as the chief factor in the spread of communicable diseases. He asked this timely question: "Which is the more likely to be the chief factor in the extension of contagious disease: inanimate objects hypothetically infected with dying bacteria, or living and moving human beings who are continuously throwing off living bacteria?" This perhaps might be classified as typical of conditions during those days: fumigation of the home followed the death of a tuberculosis patient, when no precautions whatsoever had been taken to prevent the infection of others during all the years preceding.

Thus, Dr. Chapin put public health on the track that it has been following ever since. His theory was contagious diseases got from one person to another by direct exposure to an obvious case, or by contact with a mild and often unrecognized case of the disease, or finally by exposure to a carrier—a person in whose body bacteria grow without producing the symptoms of the disease in question. These principles of the "chain of infection" might be considered what Dr. Chapin called the "solid branches of scientific knowledge which shall never be cut away." That is, as far as we know at this point, diseases will continue to spread in this way.

In the place of fumigation or terminal disinfection came an emphasis on personal cleanliness and concurrent disinfection. Dr. Chapin wrote that he believed personal cleanliness to be the most important factor in the prevention of infectious diseases. Thus, he urged health workers to teach the true relation of dirt to disease, and at the same time to help "bury" the filth theory of disease—the belief that dirt itself would cause disease.

For fear that he would be misunderstood, Dr. Chapin pointed out that he was no "lover of filth." Moreover, he realized the amount of truth in the idea that dirt may be the cause of sickness—the fact that some diseases are fecal borne. However, he wanted people to realize how far more important it was to be personally clean, and thus to avoid disease spread by nose and mouth secretions, for example, than to put their faith in the erroneous assumption that diseases were caused by emanations, gaseous or otherwise, from decaying matter.

In about 1910 Dr. Chapin was able to put into

practice many of his theories regarding communicable diseases. The Providence City Hospital, later renamed the Charles V. Chapin Hospital, for patients with infectious diseases, was the first of its kind in the nation. Many hospitals in other cities were later patterned after this one.

Needless to say, the idea of such a hospital undoubtedly came as a shock to a great many people of the time. For strict isolation was the order of the day. Certainly, Dr. Chapin realized the great value of isolation in many situations. But by the same token, he realized its limitations: the practice meant that people were protected from the obvious cases of typhoid fever, for example, but isolation could offer no protection against mild, unrecognized cases or healthy carriers of the disease. At any rate, cases of different diseases were cared for in the same ward at the hospital. And because of the rigid aseptic nursing technique employed, very few cases of cross infection from patient to patient were recorded.

All the contributions Dr. Chapin made to public health cannot be dealt with here. Many pages could be devoted to his recognition of the public health nurse's importance alone. He once commented that a specific health service requiring three or four workers then in vogue could not save half as many lives as one baby nurse. Vital statistics, also, were important, for the health officer to determine the results of health services.

An editorial in the March 1941 issue of the *American Journal of Public Health* says that Dr. Chapin might have lived and died unnoticed were it not for his keen and inquiring mind and his serene courage. All of us today can be grateful that Charles Value Chapin did have such a mind, and that he had the courage to do more than a little to challenge relatively useless practices. Because he did, better health resulted then and now.

Identity Mark for "Fainters" Would Help First Aiders
—Some standard type of identification for people with a medical condition likely to cause loss of consciousness in public has been suggested by the editor of *Today's Health*.

"This seems to be one of those good ideas that have practically no opposition and just about the same amount of support," Dr. W. W. Bauer wrote in the August issue of the American Medical Association's popular health magazine.

A coordinated and nationwide program by some organization is needed to sell the idea to the public and the medical profession, he said. Police and fire officers and public transportation employees who deal with the public in emergency situations would probably welcome such assistance since it would help them in the proper handling of unconscious people.

"To people who might become unconscious in public such a system of identification might well be a life saver," he said.

Fear Called Chief Deterrent to Heart Disease Recovery—Eliminating the patient's fear is the biggest problem faced by a general practitioner trying to help a heart disease victim recover, according to a report in the October 19 issue of the *Journal of the American Medical Association*.

The article, by Drs. Bryan Williams, Dallas; Paul D. White, Boston; Howard A. Rusk, New York City, and Phillip R. Lee, Palo Alto, Calif., shows the results of a survey among 40 members of the American Academy of General Practice from widely scattered areas of the United States.

The survey is part of a nationwide study of rehabilitation of heart disease patients. It was aided by a grant from the U. S. Public Health Service.

The solution to the problem of eliminating fear and misinformation about heart disease among patients and their families lies in education, the doctors thought. The physician, the patient, and the family should know about the more optimistic aspects of heart disease, the report said.

After the medical needs have been met, the doctors thought an unhurried explanation of the heart patient's illness is the most important step in returning such patients to an active and useful life.

The general practitioner believed that the second biggest problem they face in treating heart disease patients is the personal economic problem faced by such a patient.

"This reflects the awareness on the part of the family physician of the potentially devastating effect of the heart disease on the patient's ability to earn a living," the report said.

Seven of the 40 doctors surveyed felt the need for increased availability of facilities to help cardiacs find suitable jobs. The lack of such facilities in less populated areas was apparent from the responses to this question.

Another survey is also reported by the same four researchers in the same issue of the *Journal*. This questionnaire was sent to medical directors of 19 diversified industries operating plants in widely scattered parts of the U. S. The industries employ approximately 251,000 persons.

According to the article, only nine of the 19 industries had a stated policy to hire cardiac patients and during the preceding year only 242 were hired in a total of 19,321 new workers employed.

The article said:

"Factors considered of importance in industry's reluctance to hire cardiacs included (1) possible compensation, sickness benefit, or pension liability; (2) the large number of cardiacs already employed who developed their disease while at work; (3) lack of suitable jobs for cardiacs in addition to those already employed, and (4) a variety of lesser factors."

The article added:

"Many problems in the rehabilitation of the cardiac worker in industry remain to be solved but progress can be made by: (1) the education of practicing physicians, patients, and industry; (2) continued research in industry and in the laboratory; (3) a broad legislative study of the whole field of workmen's compensation, and (4) continued and increasing cooperation between physicians in private practice and those in industry."

Dr. Williams is clinical instructor in medicine, Southwestern University School of Medicine; Dr. White is consultant at the Massachusetts General Hospital; Dr. Rusk is professor and chairman, department of physical medicine and rehabilitation, New York University College of Medicine, and Dr. Lee is with the department of internal medicine, Palo Alto Medical Clinic.

DEPARTMENT OF HEALTH

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director

SPECIMENS EXAMINED

August 1957

Examinations for diphtheria bacilli and Vincent's	104
Agglutination tests	835
Typhoid cultures (blood, feces and urine)	667
Brucella cultures	4
Examinations for malaria	82
Examinations for intestinal parasites	3,443
Darkfield examinations	5
Serologic tests for syphilis (blood and spinal fluid)	23,250
Examinations for gonococci	1,628
Examinations for tubercle bacilli	3,564
Examinations for Negri bodies (smears and animal inoculations)	189
Water examinations	2,790
Milk and dairy products examinations	4,618
Miscellaneous examinations	610
Total	41,789

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September 1957

Examinations for diphtheria bacilli and Vincent's	152
Agglutination tests	651
Typhoid cultures (blood, feces and urine)	654
Brucella cultures	5
Examinations for malaria	49
Examinations for intestinal parasites	2,710
Darkfield examinations	1
Serologic tests for syphilis (blood and spinal fluid)	25,297
Examinations for gonococci	1,456
Examinations for tubercle bacilli	3,601
Examinations for Negri bodies (smears and animal inoculations)	167
Water examinations	1,957
Milk and dairy products examinations	4,151
Miscellaneous examinations	571
Total	41,422

BUREAU OF PREVENTABLE DISEASES

W. H. Y. SMITH, M. D., Director

CURRENT MORBIDITY STATISTICS

1957

	July	Aug.	E. E. Aug.
Typhoid and paratyphoid	2	2	10
Undulant fever	1	2	2
Meningitis	19	21	8
Scarlet fever	362	526	17
Whooping cough	21	53	54
Diphtheria	1	5	16
Tetanus	2	3	4
Tuberculosis	176	261	199
Tularemia	1	0	0
Amebic dysentery	1	3	2
Malaria	0	0	15
Influenza	111	315	34
Smallpox	0	0	0
Measles	446	182	29
Poliomyelitis	5	7	62
Encephalitis	2	2	1
Chickenpox	10	6	6
Typhus fever	2	5	3
Mumps	41	31	38
Cancer	654	975	393
Pellagra	0	0	1
Pneumonia	85	170	98
Syphilis	115	147	169
Chancroid	2	3	5
Gonorrhea	276	310	414
Rabies—Human cases	0	0	0
Positive animal heads	11	15	0

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	Aug.	Sept.	E. E. Sept.
Typhoid and paratyphoid	2	6	7
Undulant fever	2	2	2
Meningitis	21	19	7
Scarlet fever	526	467	29
Whooping cough	53	18	33
Diphtheria	5	12	33
Tetanus	3	2	4
Tuberculosis	261	155	218
Tularemia	0	0	0
Amebic dysentery	3	0	2
Malaria	0	0	5
Influenza	315	4036	46
Smallpox	0	0	0
Measles	182	65	22
Poliomyelitis	7	9	48
Encephalitis	2	3	2
Chickenpox	6	5	6
Typhus fever	5	4	3
Mumps	31	17	34
Cancer	975	724	396
Pellagra	0	0	1
Pneumonia	170	127	75
Syphilis	147	79	211
Chancroid	2	1	9
Gonorrhea	310	312	395
Rabies—Human cases	0	0	0
Positive animal heads	15	10	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

DEPARTMENT OF HEALTH

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATISTICS
AND COMPARATIVE DATA, JULY 1957

Live Births, Deaths, Fetal Deaths, Infant Deaths, and Deaths by Cause	Number Registered During July 1957			Rates* (Annual Basis)		
	Total	White	Non- White	1957	1956	1955
Live births.....	7425	4573	2852	26.4	25.6	25.3
Deaths.....	2267	1423	844	8.0	8.0	7.5
Fetal deaths.....	143	66	77	18.9	23.6	20.6
Infant deaths—						
under one month.....	168	96	72	22.6	23.8	25.0
under one year.....	218	116	102	29.4	31.7	34.3
Cause of Death						
Tuberculosis, 001-019.....	23	9	14	8.2	8.3	10.5
Syphilis, 020, 029.....	3		3	1.1	2.9	2.2
Dysentery, 045-048.....	4	1	3	1.4	0.7	
Diphtheria, 055.....						
Whooping cough, 056.....					0.7	1.1
Meningococcal infections, 057.....	1	1		0.4	0.4	0.7
Poliomyelitis, 080, 081.....						1.5
Measles, 085.....					0.4	
Malignant neoplasms, 140-205.....	296	206	90	105.0	110.0	95.7
Diabetes mellitus, 260.....	29	22	7	10.3	10.1	8.4
Pellagra, 281.....					0.7	0.7
Vascular lesions of central nervous system, 330-334.....	332	203	129	117.8	108.5	99.2
Rheumatic fever, 400-402.....	3		3	1.1	0.7	0.7
Diseases of the heart, 410-443.....	703	476	227	249.5	258.9	231.8
Hypertension with heart dis- ease, 440-443.....	132	65	67	46.8	49.0	47.6
Diseases of the arteries, 450-456.....	53	38	15	18.8	15.1	11.3
Influenza, 480-483.....	5	1	4	1.8	1.1	1.1
Pneumonia, all forms, 490-493.....	41	24	17	14.6	19.8	14.2
Bronchitis, 500-502.....	4	3	1	1.4	0.7	0.4
Appendicitis, 550-553.....	5	1	4	1.8	1.4	1.8
Intestinal obstruction and hernia, 560, 561, 570.....	15	9	6	5.3	7.2	4.4
Gastro-enteritis and colitis, under 2, 571.0, 764.....	18	5	13	6.4	4.3	7.3
Cirrhosis of liver, 581.....	18	10	8	6.4	4.0	2.9
Diseases of pregnancy and childbirth, 640-689.....	9	4	5	11.9	6.9	8.4
Congenital malformations, 750-759.....	32	24	8	4.3	4.8	4.7
Accidents, total, 800-962.....	150	99	51	53.2	63.8	52.3
Motor vehicle accidents, 810-835, 960.....	78	52	26	27.7	31.0	22.9
All other defined causes.....	437	261	176	155.1	144.2	150.1
Ill-defined and unknown causes, 780-793, 795.....	86	26	60	30.5	25.2	36.3

PROVISIONAL BIRTH AND DEATH STATISTICS
AND COMPARATIVE DATA, AUGUST 1957

Live Births, Deaths, Fetal Deaths, Infant Deaths, and Deaths by Cause	Number Registered During August 1957			Rates* (Annual Basis)		
	Total	White	Non- White	1957	1956	1955
Live births.....	7315	4604	2711	26.0	27.8	28.0
Deaths.....	2097	1267	830	7.4	8.0	8.0
Fetal deaths.....	143	72	71	19.2	21.0	28.0
Infant deaths—						
under one month.....	198	88	110	27.1	20.4	22.6
under one year.....	245	109	136	33.5	27.0	29.0
Cause of Death						
Tuberculosis, 001-019.....	30	16	14	10.6	12.6	13.4
Syphilis, 020, 029.....	3		3	1.1	1.8	1.8
Dysentery, 045-048.....	1		1	0.4	2.2	0.7
Diphtheria, 055.....	1		1	0.4		0.4
Whooping cough, 056.....						
Meningococcal infections, 057.....						0.4
Poliomyelitis, 080, 081.....	1		1	0.4	1.1	0.7
Measles, 085.....						
Malignant neoplasms, 140-205.....	275	180	95	97.6	98.1	113.7
Diabetes mellitus, 260.....	21	20	1	7.4	13.0	11.3
Pellagra, 281.....	1	1		0.4	0.7	
Vascular lesions of central nervous system, 330-334.....	296	180	116	105.0	107.1	98.1
Rheumatic fever, 400-402.....					1.1	1.1
Diseases of the heart, 410-443.....	659	419	240	233.9	259.6	259.5
Hypertension with heart dis- ease, 440-443.....	117	52	65	41.5	50.5	52.0
Diseases of the arteries, 450-456.....	50	34	16	17.7	19.1	17.1
Influenza, 480-483.....	2	1	1	0.7	1.8	0.4
Pneumonia, all forms, 490-493.....	49	25	24	17.4	15.5	19.3
Bronchitis, 500-502.....	4	4		1.4	0.7	
Appendicitis, 550-553.....	2	1	1	0.7	1.4	0.7
Intestinal obstruction and hernia, 560, 561, 570.....	8	4	4	2.8	3.6	1.8
Gastro-enteritis and colitis, under 2, 571.0, 764.....	12	2	10	4.3	6.1	5.1
Cirrhosis of liver, 581.....	10	6	4	3.5	6.1	4.7
Diseases of pregnancy and childbirth, 640-689.....	4		4	5.4	5.1	8.9
Congenital malformations, 750-759.....	39	30	9	5.3	3.1	4.0
Accidents, total, 800-962.....	172	123	49	61.0	64.5	57.8
Motor vehicle accidents, 810-835, 960.....	88	66	22	31.2	34.2	25.1
All other defined causes.....	386	186	200	137.0	143.1	149.7
Ill-defined and unknown causes, 780-793, 795.....	71	35	36	25.2	30.3	32.3

*Rates: Birth and death—per 1,000 population; Infant deaths—per 1,000 live births; Fetal deaths—per 1,000 deliveries; Maternal deaths—per 10,000 deliveries; Deaths from specified causes—per 100,000 population.



BOOK REVIEWS

A Dictionary of Terms in Pharmacognosy. By George M. Hocking, Ph. D., Professor of Pharmacognosy, Alabama Polytechnic Institute; Chairman, Subcommittee on Pharmacognosy, Committee on National Formulary. Cloth. Price, \$9.75. Pp. 284. Charles C. Thomas, Publisher, Springfield, Ill., 1957.

Pharmacognosy is defined as "the science devoted to the study of those medicinal and related products of crude or primary type obtained from the vegetable, animal, and mineral kingdoms as they appear on the market as raw materials, as they occur in folk medical practice, and as they function in chemical manufacturing processes."

One well versed in the subject has compiled a dictionary of terms embraced in this interesting field, and all those who have access to it will admit that the volume represents a tremendous amount of painstaking work.

As stated by the author in his preface: This Dictionary "is designed to meet the special needs of students and practitioners in the various health professions (pharmacy, medicine, dentistry, nursing, veterinary medicine, etc.); of people in trade and industry (wholesalers, jobbers, dealers, manufacturers, importers, and other suppliers); and of others, including laymen with an amateur interest in the useful plants and animals of our world."

Douglas L. Cannon, M. D.

Modern Perinatal Care. By Leslie V. Dill, M. D., F. A. C. S., Diplomate of the American Board of Obstetrics and Gynecology; Associate Clinical Professor of Obstetrics and Gynecology, Georgetown University School of Medicine; Consultant in Obstetrics and Gynecology, Army Medical School and Walter Reed General Hospital; Staff Member, Obstetrics and Gynecology, Providence Hospital, Washington, D. C. Cloth. Price, \$6.50. Pp. 309. Appleton-Century-Crofts, Inc. New York, 1957.

This book was written to crystallize current thought on perinatal care as pertains to both mother and child. Conduct of labor and delivery is omitted. As a summary of current thought, this book is as precise and forthright as one can be. There are chapters on all aspects of the perinatal period, ranging from the diagnosis of pregnancy to the management of the fourth stage. The chapter on hygiene of pregnancy is thorough, and it stresses simple treatment of the common complaints of pregnancy. The chapter on abortion emphasizes the limitations of effective treatment of threatened abortion. A very conservative approach to incomplete abortion is recommended.

Nutrition, as applied to the pregnant woman, is presented in great detail as to the influence of the various vitamins, proteins, etc. Changes in certain concepts about protein need, weight gain, etc., were brought about by data obtained from Holland, Germany, and Norway during the war. The author shows that experiences with mass semi-starvation in these countries

during the war have altered much of the previous thinking about nutrition during pregnancy.

The chapters on pelvic mensuration, toxemias, anemias, and heart disease describe the current conservative approaches. The chapter on pregnancy and diabetes emphasizes the need for cooperation between internist and obstetrician. There are adequate chapters on the current concepts of the treatment of venereal disease in pregnancy, tuberculosis, and thyroid disorders. The usual disorders of the first few days of life are discussed in the chapter on fetal and neonatal mortality; prophylaxis of these is stressed. There is a chapter on erythroblastosis and another on infant feeding. The final two chapters are on the legal and moral aspects of the practice of obstetrics and should be beneficial to all readers.

In reading this book, one is impressed with the author's efforts to describe the current ideas on perinatal care. He has succeeded with a book that is not overly verbose. Simplicity and safety in treatment are repeatedly stressed. Anyone who has a part in pre- or postnatal care can profit from this volume. So, it is recommended as a convenient review of good perinatal care as we know it today.

Joe W. Perry, M. D.

Lens Materials in the Prevention of Eye Injuries. By Arthur Hail Keeney, M. D., D. Sc., Section on Ophthalmology, University of Louisville School of Medicine, Industrial Research Institute, University of Louisville, Louisville, Ky. Fabricoid. Price, \$3.50. Pp. 73, illustrated. Charles C. Thomas, Publisher, Springfield, Ill., 1957.

This is a short (73 pages) monograph written as a thesis for admission to the American Ophthalmological Society. It is an ardent expression of the need for safety lenses in all semi-hazardous and hazardous games and occupations. The author has painstakingly investigated the relative merits of glass and plastic lenses for these purposes.

Various advantages of plastic lenses, as contrasted with hardened crown glass, are compared as to their birefringence patterns, thermostability, fracture patterns, impact resistance, indentation hardness, resistance to common chemicals, and density for roentgen rays.

In summary, industrial case-hardened crown glass lenses offer as much safety protection from flying missiles, of small or large size, as the allyl plastic lens (Armorlite). Plastic lenses are preferable because of their lightness (50% lighter than glass) and greater impact resistance. Their disadvantage is that they will deform with excessive heat (above 90° F) and change with chemicals—solvents. The cost of plastic lenses at the present time is slightly more than glass lenses. Plastic lenses are still not good for children since they are too rough and careless to protect the softer surface of the lenses.

This monograph is of main interest to those prescribing spectacle lenses.

Karl B. Benkwith, M. D.

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THE CAUSES OF CORONARY DISEASE

RHETT P. WALKER

Mobile, Alabama

The magnitude of the problem of coronary heart disease should need no emphasis to physicians or to the public at large. I think it is worth noting that, if present trends continue, one out of every three persons in this room will die of coronary heart disease.

It seems worth while reviewing some of the basic aspects of the disease before describing some of the newer developments and concepts. Coronary heart disease is the result of the narrowing or occlusion of one or more of the coronary arteries which supply blood to the myocardium. This narrowing is caused primarily by the formation of atheromata. A secondary but extremely important factor is the clot which forms at the site of the narrowed vessel, with resulting complete occlusion of the vessel lumen.

The early lesions of atherosclerosis are characterized by intermittent waves of macrophages carrying excess crystal ester cholesterol into the arterial intima. These esters stimulate growth of connective tissue and this leads to scarring. The accumulation of this lipid material, together with the accompanying fibrosis, make up the atheromatous plaque.^{1, 2} These plaques may be distributed at certain focal points, particularly at the bifurcation of the coronary arteries or they may be distributed throughout a large part of the coronary circulation.

Clinical heart disease may occur without clot formation, but acute myocardial infarction is frequently preceded by the formation of a clot at a point of the luminal narrowing. The site of lumen compromise, the speed at which it develops, the presence and adequacy of collateral channels, and other factors will influence the clinical pattern

which follows.

At this time, I think it is well to emphasize a point which has been made by pathologists for many years, but which is frequently unappreciated or ignored by clinicians. We tend to use the word arteriosclerosis in a rather loose sense without designating clearly or, frequently, without understanding clearly what we mean. Arteriosclerosis is a generic term to include a number of different processes. It is applied not only to atherosclerosis, as is the type observed in the coronary arteries, but also to the arteriolosclerosis which occurs in hypertension, the medial or Monckeberg's sclerosis which occurs particularly in the aged in arteries such as the brachial and radial, and hypertrophy of the muscularis which occurs in hypertension. It is important to distinguish these varieties clearly because the intimal sclerosis or atherosclerosis is the only one of the group directly related to coronary disease.

For many years it has been customary to think of atherosclerosis and coronary disease as an integral part of the aging process. There has been a tendency to accept this as inevitable and regard it philosophically as a burden which must be borne. Although we certainly do not yet have all the answers, there is at least one point on which every responsible person working in this field agrees. This point warrants emphasis and it is that coronary heart disease is not part of the aging process but represents a disturbance of lipid metabolism, which is very likely preventable and in part at least reversible. In an autopsy study of 200 American soldiers killed in Korea at an average age of 22, gross coronary atherosclerosis was present in 77%, and in 10% was severe enough to compromise over 50% of the lumen.^{3, 4}

The author is Director of Medical Education, County Hospital, Mobile.

Read before the Association in annual session, Mobile, April 18, 1957.

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The general methods for studying atherosclerosis are threefold. First, there is clinical investigation. By this we mean a thorough study of clinical material, both on the individual patient and particularly on large groups of patients. Second is the epidemiologic approach. This approach has long been used in the study of infectious disease, but only in recent years has been utilized to any appreciable extent in the study of other diseases. This method involves the study of the incidence of coronary disease among various population groups, with an attempt to relate the incidence to ethnic, cultural, economic, and other factors. This perhaps has been the most fruitful of the three approaches. It was the epidemiologic approach which highlighted such facts as the observation that the incidence of coronary heart disease in Italians living in Italy is only one-fourth that of similar groups living in this country.⁵ Third, the experimental approach deals with the production and prevention of coronary atherosclerosis in laboratory animals. The classic experiment with this avenue to investigation was the production of atherosclerosis by cholesterol feeding in the rabbit by Anitschkow in Russia some fifty years ago.⁶

It has been known for a number of years that atherosclerosis tends to occur earlier and in a more severe form in a group of diseases which seem to have only one factor in common. These diseases include diabetes mellitus, nephrosis, myxedema,^{2,7} and xanthoma tendinosum.⁸ This common factor is high blood cholesterol.

These facts, together with the knowledge that the atheromas contained a large amount of cholesterol, helped to focus attention on cholesterol and lipid metabolism. A number of materials circulating in the blood have been measured in the human and in the experimental animal. These include total cholesterol, cholesterol esters, alpha and beta lipoproteins, phospholipids, and certain groups of lipoproteins classified according to their flotation rate in ultracentrifuge. The technique of ultracentrifugal analysis requires some comment. This method has been developed largely by Dr. Gofman's laboratory in California and its virtues have been loudly sung by its proponents. Cholesterol exists in serum not in simple solution but in

complex physical chemical combinations with lipoproteins of varying weights. It is these lipoproteins, particularly those classified by Dr. Gofman as Sf-10-20 and 20-100, which are said to be of particular significance in determining the susceptibility of the individual to clinical coronary disease. Critical evaluation by other responsible investigators has thus far failed to substantiate the vigorous claims made by Dr. Gofman.⁹ Though with certain reservations, total cholesterol is still considered by most authorities as being the most useful parameter of lipid metabolism which can be readily measured.

It is widely accepted that heredity is of crucial importance in determining an individual's susceptibility to coronary disease. While heredity has some importance, particularly in such well defined states as hereditary hypercholesterolemia,^{10,11} its importance in the ordinary patient has been, I believe, exaggerated.

In a large retrospective study of American soldiers who died of coronary heart disease, Yater found that the coronary group had a family history of heart disease approximately three times that of the control group.¹² While we cannot ignore this point, it might be worth pointing out parenthetically that familial eating habits were probably similar.

It was apparent from Anitschkow's experiment fifty years ago with rabbits and from epidemiologic studies twenty years ago or more, particularly that of Rosenthal in 1934,¹³ that diet might well be a significant and perhaps major factor in the genesis of coronary atherosclerosis. In recent years, Dr. Ancel Keys of the University of Minnesota has been the leading worker in the epidemiologic approach. The studies covering the incidence of coronary disease in various populations have become very numerous.¹⁴ I shall attempt to

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review only a small part of these observations, but I do wish to emphasize the consistency of the results. In every instance they have confirmed the low incidence of coronary disease in groups which habitually consume a low fat, low cholesterol diet and a high incidence in populations which consume a high fat, high cholesterol diet. For example, among Italian males 50 to 54 years of age, there is a mortality ascribed to coronary disease of 117 per 100,000 population.⁵ Among American males of the same age group the mortality is 544 per 100,000 population. The age specific rate for the U. S. population is therefore over $4\frac{1}{2}$ times that of the Italians. The incidence of coronary disease among the Italians living in America is essentially the same as that of other Americans. The Italian diet contains, on the average, between 20 and 30% fat while the American diet contains 40 and 60% of the caloric content as fat.

In China, Japan, and much of the Far East, coronary disease is quite rare, indeed almost non-existent in many areas.^{15, 16} That heredity or racial factors are not the determining point here is emphasized by the fact that Orientals with an American diet have an incidence of coronary disease approaching that of the native white population. For men in comparable age groups the incidence of clinical coronary disease in the United States is about tenfold greater than that in Japan.¹⁷ Among the Bantu of South Africa and among Negro people in general in Africa, the incidence of coronary disease is very low.¹⁷ It has been the impression of many physicians in this country, at least in years past, that coronary disease among our colored population is considerably less than the white. This may well have been true at one time and is probably true in certain areas today but as economic and other differences between the Negro population and the white population become less marked, it is apparent that the incidence of coronary disease among Negro people is essentially the same and perhaps more than among the white.² In many countries, such as Spain and Guatemala, there have been studies comparing the incidence of coronary disease between various economic classes in the same country.^{14, 18} In these countries there are major differences of diet and the principal difference seems to be that the well to do group has a high fat diet

while the poor groups have a low fat diet. In these countries it is apparent from every study that coronary atherosclerosis is a rich man's disease. In America, where high fat foods are relatively cheap and readily available, this differential does not exist or if it exists at all it is much less apparent.²

It has been argued that the increasing incidence of coronary disease among Negroes in this country is the result of racial dilution. This may be true but one frequently sees individuals with myocardial infarction who show no obvious evidence of ancestral miscegenation.

Not only can a correlation be made between dietary custom and coronary mortality but there is also a correlation between diet and plasma lipid patterns.^{17, 19} The values for cholesterol which we ordinarily accept as normal in this country turn out to be high when we compare them with the normal values obtained from Italians, Spanish, South African, Guatemalans, Japanese and others. Perhaps more striking still is the fact that among Americans the plasma cholesterol level tends to rise gradually with each decade, at least up to about the age of 60. This rise is much less among the Bantu of South Africa or among the poorer classes of Spain or Italy.¹⁷ Of further interest was the experience in some of the European countries during World War II.^{20, 21} In Finland and Norway particularly, it was observed that the incidence of coronary disease among individuals coming to autopsy in each specific age group declined considerably during the war years when the population was on a diet low in fat and cholesterol. In Denmark where the diet did not change very much this trend was not apparent. The war experience in Scandinavia, and particularly Norway, also illustrated another point. It is feared by some that lowering the dietary fat will decrease resistance to infection. While it is of course true that gross malnutrition will increase susceptibility to many infections, the Norwegian experience shows that the death rate due to tuberculosis actually declined during the years of dietary fat restriction and decreased coronary disease. In World War II the mortality of coronary disease in soldiers under 35 was four times as high in the American Army as in the British Army.²² The Americans were fed a diet rich in milk, butter,

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eggs, meat and ice cream, while their British cousins ate mostly beans, cereals, and bread. The Eskimo is frequently cited to refute the importance of fat. The studies which have been done on the Eskimo have been small and some of the data conflicting.²³ Several points of interest, however, have emerged. The Eskimo diet varies considerably from tribe to tribe, but insofar as has been determined the quantities of fat and cholesterol in the Eskimo diet are comparable to or perhaps less than that in the average American diet. There is some evidence that Eskimos may have less coronary disease but they are certainly not immune to it. Among the more primitive groups the hazards of life are such as to prohibit any large proportions of population from reaching the age groups where coronary disease is most commonly seen, and this may well be a factor affecting the various analyses of the problem. The Eskimo diet contains a different group of fat from that found in the average American diet and this may well be significant.

In the experimental animal, atherosclerosis may be produced in several ways.^{24, 25} In the rabbit it is easily produced by merely adding cholesterol to the diet. The dog seems to be able to handle exogenous cholesterol better than the rabbit, but with prior production of myxedema the administration of cholesterol will produce atherosclerosis.²⁶ The chick is quite susceptible to atherosclerosis, and it is of interest that a Japanese in 1922 produced atherosclerosis in the chicken by feeding the hen her own eggs.¹⁸ In the monkeys and rat, atherosclerosis may be produced by feeding the animal a combination of cholesterol lipid feeding and diet deficient in sulfhydryl containing amino acids.⁷ In all experimental animals the important fact seems to be that the *sine qua non* for the production of atherosclerosis is a derangement of lipid metabolism adequate to produce a sustained elevation of blood lipid and cholesterol.¹⁴ Though not a point of established significance in the human, it is of interest that a special type of protein deficiency in the monkey is related to atherogenesis. In the human, lowering dietary fat will lower serum cholesterol.²⁷

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Thus far I have talked about fat in the diet and cholesterol in the diet more or less interchangeably. Strictly speaking, this probably should not be done, but in human nutrition cholesterol and fat are so closely associated that it is very difficult to eat a high cholesterol diet without eating a high fat diet. From an experimental point of view, however, it has been shown that, in the absence of neutral fat in the diet, cholesterol ingestion will not lead to hypercholesterolemia or to atherosclerosis.²⁸ There has been considerable debate concerning the importance of exogenous cholesterol because of the body's well known ability to synthesize cholesterol from simple metabolic fragments. It hardly follows, however, that the ability to synthesize the material renders exogenous supply of no importance. In any case, dietary cholesterol in the human seems to be of considerably less importance than dietary fat. I mentioned earlier that there is suggestive evidence that all fats are not the same in their atherogenic potentialities.^{29, 30} There is a general correlation with the degree of saturation of fatty acids. The unsaturated fatty acids seem to have less atherogenic proclivity.³¹ Fats of animal origin, such as those found in meat, cheese, milk, butter and eggs, contain largely saturated fatty acids. Vegetable oils such as corn oil, cotton seed oil and olive oil are made up largely of unsaturated fatty acids. Fats derived from marine sources are largely unsaturated. Coconut oil and hydrogenated vegetable fats such as margarine are largely saturated. A recent study to illustrate this point concerns the use of sunflower seed oil. A patient fed a diet containing approximately 85% of the calories in the form of this relatively unsaturated oil showed a marked decrease in serum cholesterol. Substitution of corn oil for most of the animal fat will lower serum cholesterol in normal individuals.

Although there is a tendency for atheromas to accumulate with age and for blood cholesterol and other lipid fractions to rise with age, it should be mentioned that large scale autopsy studies done by Dr. Edwards and his group at the Mayo Clinic suggest that there is a tendency for the degree of atherosclerosis to level off at about 60 and perhaps to decline slightly with advancing years.³² Similarly there is a tendency for the serum cholesterol

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31. Shapiro, W.; Estes, E. H., and Hilderman, H. L.: The effect of unsaturated fats on serum lipids in normal active subjects, *Clin. Fed. Proc.* 5: 107, 1957.

and lipid values to level off also. This seems to be further evidence that atherosclerosis is not part of the aging process *per se*.³³ It has been appreciated for many years that women below the menopause rarely have clinical coronary artery disease. The ratio of coronary disease in men to women below the age of 40 is something like 20-1. After bilateral oophorectomy there is a tendency for women to develop atherosclerosis with a pattern resembling that in the male. Postmenopausally, the incidence of coronary disease in the female rises gradually to approximately that of the male. It was deduced from these clinical observations that estrogen might be the retarding influence of the disease process. Animal studies and human lipid studies have borne out this conclusion.^{34, 35} It has been repeatedly shown that cholesterol-induced atherosclerosis can be inhibited by estrogen. The relation of exercise to the development of coronary disease is not entirely clear.

There is suggestive evidence that exercise may have a protective value. Morris in England made an interesting study several years ago comparing the incidence of coronary disease in London bus drivers and London bus conductors on the two-level buses.³⁷ The driver has a job which is sedentary from a physical point of view, although perhaps fraught with a certain amount of emotional tension. The conductor is constantly on his feet running up and down stairs. The incidence of coronary disease among these conductors is about one-half that among the drivers. Because of a number of variables involved, it is difficult to prove that exercise is the determining factor.³⁸ Although exercise in certain circumstances may have protective value, the recent studies in Finland are of interest.³⁹ Finland is a country which is largely rural, with a population which takes

pride in physical fitness. Large segments of the population live away from the urgencies and pressures of urban life and work at such vigorous pursuits as woodcutting. Yet among these rural manual workers the serum cholesterol levels and the mortality from coronary disease are among the highest in the world. So is their consumption of butter.

Clinical observation has suggested that hypertension might be an aggravating factor in coronary disease. Most patients with coronary disease do not have hypertension. It does appear, however, that hypertension has a tendency to accelerate the development of coronary disease.

Actuarial data from life insurance companies on life survival have focused attention on the role of obesity in the production of coronary disease.⁴⁰ While it is true that a person who is grossly obese seems to have a greater tendency to develop coronary disease, there are a great many persons who develop the disease who are not obese and conversely a number of obese people who do not develop the disease. In parts of the world where a high carbohydrate low fat diet is eaten, as in Italy, the incidence of obesity seems to be about the same as in America, yet the incidence of coronary disease is much less. It may be that the general correlation of obesity with coronary disease is related to the fact that fats are high in calories and consequently a person who eats a high fat diet is likely to become obese.

In several studies, particularly among young men with coronary disease, it has been stressed that body habitus is of considerable importance.⁴¹ A typical young candidate of coronary disease is described as an endomorphic mesomorph. That is, he is a relatively short, broad, muscular individual with a moderate accumulation of fat. It is of interest, however, to point out that in population groups other than American there are many mesomorphs who seem to have no particular tendency toward coronary disease.⁵

Smoking now seems to be well established as a factor of importance in the etiology of bronchogenic carcinoma. As the statistical data accumulate it appears that it may well be of importance in the genesis or at least the aggravation of coronary heart disease.⁴² For example, the death rates

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40. Connell, W. F.: Adiposity and atherosclerosis, *Canad. M. A. J.*, March 1954.

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42. Hammond, E. C., and Horn, D.: The relationship between human smoking habits and death rates, *J. A. M. A.*, 155: 1316, 1954.

for men who smoked a pack or more of cigarettes a day was more than twice as high as the death rates of those who never smoked in the age group of 50 to 54 and 55 to 59 and 60 to 64. For those who are statistically minded, it should be pointed out that the *p* value for these associations is .00002 or less. This means that there is less than one chance in 50,000 that the differences are due to chance.

The factor of mental stress is frequently cited by both physicians and laymen as of fundamental importance in the genesis of coronary disease. Evidence to support this view is difficult to produce. There has been a recent study suggesting that stress may increase the synthesis of endogenous cholesterol and thus modify serum lipid values in a direction associated with atherosclerosis. The great bulk of evidence, however, offers little support to the stress theory. It hardly seems likely that the Japanese, Italians, Bantu, or the inhabitants of war torn Europe should have less stress than contemporary Americans. Dr. Arnott of Birmingham, England has expressed the reasons for the persistence of this idea very well with the following statement: "How much nicer it is when stricken with a coronary thrombosis to be told that it is all due to hard work, laudable ambition, and selfless devotion to duty than to be told it is due to gluttony and physical indolence."⁴³

It has often been noted that patients dying of Laennec's cirrhosis seemed to show less coronary artery disease than other groups. It has been speculated that the presence of severe liver disease inhibits atherosclerosis by the failure to detoxify estrogens or by the inability to synthesize cholesterol. It should also be noted that the alcoholic seldom eats a high fat diet.

An intriguing approach to the prevention of atherosclerosis has been through the feeding of various compounds related structurally to cholesterol but differing in molecular arrangement.^{44, 45, 46} These substances include sitosterol, which is a plant sterol, and dehydrocholesterol, which is identical to cholesterol except for the presence of a double bond. The ingestion of such materials while on an otherwise atherogenic diet will prevent atherosclerosis in an experimental

animal and in the human will modify the lipid pattern in the direction of normal.⁴⁶ It is presumed that the cholesterol in the gut, both that which is ingested and that which is excreted in the bile, is bound with this material and excreted in the stool rather than reabsorbed into the circulation.

The largest body of experimental work having to do with coronary disease is necessarily focused on lipid metabolism. Though not a part of the atherosclerotic process per se, the formation of clots in the already compromised lumen is frequently the factor which precipitates overt myocardial infarction and frequently death. It is well known that clots tend to form intralumenally in areas where intima is roughened. It may well be that diet has an effect on this final clotting in addition to its effect on the atheromas. It has been noted that thromboembolic disease in general seems to be much less in certain population groups with low fat diet.⁴⁷ It has also been noted that fatty meals may tend to accelerate the rate of blood coagulation.⁴⁸

SUMMARY

Coronary atherosclerosis, with its concomitant syndromes of angina pectoris and myocardial infarction, congestive heart failure and premature death, is a tremendous problem in the world today and particularly in the United States. A number of factors seem to bear on this disease. These include heredity, aging, exercise, hypertension, obesity, body habitus, smoking and the presence of other disease. A very large and convincing body of evidence, however, focuses on the role of diet and tends to make other factors seem less important. The available evidence, clinical, epidemiologic and experimental, strongly suggests that high concentrations of fat in the diet are a major factor in producing clinical coronary artery disease. It seems also likely, though less well established, that certain fats, particularly unsaturated vegetable fats and sterols, are not only less atherogenic but probably actually protective. I believe that evidence is sufficient to warrant that physicians treating patients with coronary disease should advise them to adhere to a low fat, low cholesterol diet, perhaps supplemented with unsaturated vegetable oils. Perhaps there are also lessons for all of us in these data.

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AMA Plans New Exhibits in '58—To reach more and more Americans with authentic up-to-date health information, the AMA's Bureau of Exhibits announces a number of major plans for 1958. First, a new exhibit titled "How We Breathe" will be ready for bookings after January 1, 1958. This exhibit will present a three dimensional model of the organs involved in breathing—the nose, pharynx, larynx, bronchial tubes and lungs. Other features include actual preserved human lungs; a unit to demonstrate the mechanism of breathing and the part played by the diaphragm and rib cage, and a section showing the exchange of oxygen from the lungs to the blood and carbon dioxide from the blood to the lungs.

Two other exhibits also are well along in the planning stages for next year: (1) the brain and nervous system, featuring a human brain embedded in plastic and (2) the endocrine system. Further details will be announced later.

Finally, small editions of the popular "Life Begins" exhibit are being built, incorporating most of the information in the large exhibit but displaying only one fetus embedded in plastic. Other fetuses in varying stages of development will be shown pictorially.

THE SOUTHERN MEDICAL ASSOCIATION AND GENERAL PRACTICE IN THE SOUTH

J. P. CULPEPPER, JR., M. D.
President, Southern Medical Association
Hattiesburg, Mississippi

Among many emotions that completely encompass me today, the feeling of humility is the greatest. Of course, I am very conscious of the great honor your organization has conferred on me in asking that I give the annual James S. McLester Address. For this honor I am deeply grateful. On the other hand I feel exceedingly humble when I think of the many facets in the life of the great medical leader we are to pay homage to on this occasion.

Those of us who live to reach my status in life develop a certain philosophy of living and only a very few of the material values of life mean much to us, such as our family, our religion, our profession and our friends. All of these things become so interwoven and overlapping in our philosophy of living that it is often hard to tell where one ends and another begins. The combination of all of these factors gives us certain ideals, motivations and goals in life that are inspiring and impelling and are in a large way responsible for the things we accomplish.

Dr. McLester was a man of very high ideals and great motivation. Otherwise he could not have made so many outstanding contributions to our profession.

Dr. McLester was a native of Alabama, having been born here in Tuscaloosa, January 25th, 1877. His collegiate education was obtained at the University of Alabama where he received his B. A. degree in 1896. His degree of Doctor of Medicine was given by the University of Virginia in 1899. His education was continued abroad until 1902 when he returned to become Professor of Pathology at Birmingham Medical College. After a few years this title was changed to Professor of Internal Medicine, and he began the practice of internal medicine in Birmingham. In 1907 and 1908 Dr. McLester again went abroad for more training, no doubt with the same idea that is one of the basic principles of the Academy of General Practice today, that our education is never completed and that in order to be better doctors we must continue to study. The Birmingham Medical College was discontinued in 1912, so for a few years Dr. McLester was not actively engaged in teaching.

In 1919 Dr. McLester was made Professor of Medicine at the School of Medical Sciences, a part of the University of Alabama. This position he

held for many years, and he had a very prominent part in helping to establish the four-year medical school at the University of Alabama. His leadership in this endeavor was outstanding.

Soon after the outbreak of World War I, Dr. McLester was commissioned a Major in the Medical Corps and later saw active service overseas. In 1919 he returned to Birmingham and resumed his practice and teaching of internal medicine.

Dr. McLester was primarily interested in nutrition and metabolism, and gave many addresses before medical meetings and published many articles on these two important subjects. He also wrote and published two important books—"Nutrition and Diet in Health and Disease" and "The Diagnosis and Treatment of Disorders of Metabolism."

Dr. McLester had a most distinguished career in many medical organizations. He served as President of the Medical Association of the State of Alabama in 1920. In the American Medical Association he served as Secretary and later as Chairman of the Section on the Practice of Medicine. He was a delegate from the Medical Association of the State of Alabama to the American Medical Association and was also on the A. M. A. Council on Medical Education and Hospitals. At the annual American Medical Association meeting in Cleveland, Ohio, in 1934 he was elected president of that body. He presided at the Atlantic City meeting in 1935 as the eighty-eighth president of the American Medical Association.

At the Cleveland meeting in 1934, when Dr. McLester was elected president of the American Medical Association, a most significant thing happened that was to have a great impact on medicine, in the South especially and all over the world in general.

While in Cleveland Dr. McLester heard of a young doctor there at Western Reserve University who was doing some pioneer work on pellagra. He arranged for a meeting with this young scientist with the purpose of seeing and reviewing his work. Dr. McLester was greatly impressed by what he saw, and although there was a great similarity in the pellagra he saw in Cleveland and the cases he had seen in Alabama he thought there must be a difference, for the Alabama cases died in the great majority of instances while those in Cleveland under the care of the young scientist were getting well.

Dr. McLester was so favorably impressed by

*The James S. McLester Lecture before the Alabama Chapter, American Academy of General Practice, Semi-annual Postgraduate Seminar, Druid City Hospital, Tuscaloosa, Alabama, August 22, 1957.

what he saw that, as Chairman of the Medical Advisory Board of Hillman Hospital, he invited Dr. Tom D. Spies to come to Hillman Hospital and arrange for a staff appointment at the hospital to carry on his work. This staff position Dr. Spies still holds.

The recent action of the American Medical Association in giving Dr. Spies the Distinguished Service Award might suggest that one of the greatest things Dr. McLester did for medicine in Alabama and in the South was persuading Dr. Spies to do some of his work in the South at Hillman Hospital and at the University of Alabama. This work and many subsequent research projects done by Dr. Spies and his associates have been a great boon to mankind. We owe a great debt of gratitude to Dr. McLester as well as to Dr. Spies.

As President of the Southern Medical Association it affords me a great deal of pleasure to tell you that Dr. McLester was very active in this great organization also. He joined the Southern Medical in 1907, one year after the Association was organized in Chattanooga, Tennessee, on October 2nd and 3rd, 1906. According to the records he attended twenty-three annual meetings and it is presumed with a great deal of certainty that he attended several other early meetings from which records of attendance are not available, for a number of the early meetings were in and around Birmingham. He served as Secretary of the Section on Medicine for the 1907 meeting of the organization in Birmingham. He was Chairman of the Section on Medicine at the meeting in Memphis in 1917. The record shows that Dr. McLester published fifteen papers in the Journal of the Southern Medical Association between 1915 and 1935. The subjects covered a very wide range from the first in 1915 on "The Glycosurias" to the last in 1935 on "The Emotional Factor in Disease." The subjects in between dealt with nutrition, chemical analysis of the blood, blood transfusions, obesity, radiology and medical education. In 1920 there was a very significant publication by this great man on "Graduate Medical Education in the South."

In reviewing the above facts about the life and works of Dr. McLester it is very easy to see that he was a man of great vision, great leadership and great ability. The very enviable position that organized medicine occupies today did not just happen, but it is due to our great leaders in the profession such as Dr. McLester.

The history and background of the Southern Medical Association is not without interest in its first fifty years of service to medicine of the South. At the turn of the century some of our leaders of medicine in the South recognized the fact that in order for the art and science of medicine to advance as it should a more closely knit organization of our Southern States was neces-

sary. For a few years prior to 1906 there was a Tri-State Medical Association composed of members from Alabama, Georgia and Tennessee always meeting at Chattanooga. There was also a Nashville Academy of Medicine, and it was at a meeting of this body in August 1906 that it was decided that there should be a much larger regional organization in the South. Dr. G. C. Savage of Nashville was President of the Tennessee State Medical Association that year so he was designated to send out invitations to the Presidents of the Medical Societies of the states of Alabama, Georgia, Florida, Louisiana and Mississippi to join with representatives from Tennessee at The Read House in Chattanooga on Tuesday, October 2, 1906, with the above purpose in mind. As a result of this meeting of representatives of the above states, the Southern Medical Association was organized.

At subsequent annual meetings the other states in the South were added, as was the District of Columbia, this being the territory of the sixteen Southern States and the District of Columbia. The original constitution provided, as does the present one, that the Southern Medical Association was strictly a scientific organization and its sole purpose was to foster scientific medicine in the South. The organization was not at any time to take part in any economic, political or sectarian questions or concerted movements for securing legislative enactments. It was to be an independent association having no official affiliation or connection with any other organization. It was to tie in with organized medicine by providing that a physician to become a member of Southern should first be a member in good standing of his local and state organizations. These requirements have not been changed. Today our membership numbers approximately ten thousand doctors in our South Land.

At the organization meeting three sections were provided for—medicine, surgery and ophthalmology and otolaryngology. Throughout the years seventeen other sections have been created, making the total now of twenty.

At the annual meeting of the Southern Medical Association in St. Louis in November 1941 the Council, our governing body, arranged for a Section on General Practice. This was the first time any organized body had officially provided for or created a separate Section on General Practice. This section held its first session at the annual meeting in Richmond, Virginia, in 1942, and has continued to function in a very big way since that date. We in the Southern are very proud indeed that our organization was the very first in the country to recognize general practice as a group entity. Soon after this, the Michigan State Society and, later, the American Medical Association organized Sections on General Practice.

At the American Medical Association meeting in Atlantic City in 1947 a handful of family doctors, about one hundred fifty, got together in a spontaneous movement and organized the American Academy of General Practice. This was due to the fact that the supply of family doctors was becoming shorter and shorter each year because of the emphasis our medical schools were putting on specialization.

The aims and ideals of this new organization, as set out in the original constitution and by-laws, were extremely wise and far-reaching. I would like to quote to you the original objectives set forth in simple language:

1. To promote and maintain the highest standards of general practice.
2. To encourage medical students to become qualified family doctors.
3. To preserve the general practitioner's right to practice medicine to the full extent of his ability.
4. To provide postgraduate training opportunities for the family doctor.
5. To advance the science of medicine and the nation's health and welfare.

As a result of the meeting in 1947 in Atlantic City, a chain reaction started. County and state chapters were organized in all parts of the country. Today the Academy has approximately twenty-five thousand members.

To my mind, this is one of the healthiest situations that could possibly exist in medicine today. In this day and age in which our profession is being harassed on all sides by socialized and bureaucratic infiltrations we need a basically sound, thoroughly progressive and fundamentally positive public relations approach to things medical. It is my feeling that no other person occupies the strategic position with the general public as does the family doctor. His position is unique in that he has an opportunity to know the family background, the economic and social problems of the family, thus his opportunity for creating good public relations for the profession is almost unlimited. We must at all times strive to create an atmosphere where the fundamentals of a free practice of medicine may exist, the doctor-patient relationship without the intervention of a third party and the free choice of a doctor. These things are essential to any private, free enterprise. We cannot countenance the practice of medicine by hospitals or any type of corporate practice by state or government and at the same time retain our system of private practice as we now know it.

It is my firm belief that the general practitioner, or as I like to call him, the family doctor, is the one person who can do more to support and maintain

the basic principles of the private practice of medicine than any other person. Frankly, I am very proud that I am a doctor and that, of necessity, I have been a general practitioner for more than thirty years. When you grow up with a small town your patients look to you to advise them about most of their problems, both medical and otherwise. There is nothing in life that is more gratifying than the true friendships, confidence and respect given us by our patients.

I feel that your, and my, organization of general practice groups throughout the country are the logical ones to furnish the leadership so much needed today. This was exemplified by my good friend, Dr. Dwight H. Murray, a general practitioner, who so ably presided over the American Medical Association last year. Leadership of the highest caliber is so essential at this crucial time in the practice of medicine.

It has been a great honor to me, as President of the Southern Medical Association, to try, in a very humble and limited way, to pay homage to Dr. McLester who was one of the great leaders in organized medicine from the state of Alabama. I would like to quote a few lines from the preamble to the Constitution of the Mississippi State Medical Association. This has meant much to me, for I think it sets forth in a very beautiful way the meaning of true leadership whether it be an individual or an organization.

"That more may live longer in the richness and comfort of health;

That pain, suffering and disease may be eradicated to the extent made possible by scientific medical knowledge;

That the standards of the medical profession may be maintained on the highest plane of honor,

We dedicate ourselves as physicians through this Association.

Among us, membership is a privilege,

Earned by professional qualification, personal honor and selfless service.

It is not a right vested superficially nor by statutory licensure.

Truth shall be our quest, diligence our staff and service our purpose."

I would like to close with one of my favorite quotations: "Whatsoever things are true, whatsoever things are honest, whatsoever things are just, whatsoever things are pure, whatsoever things are lovely, whatsoever things are of good report, if there be any virtue, and if there be any praise, think on these things."

COAGULATION DEFECTS IN PREGNANCY

WILLIAM H. ROBERTSON, M. D.

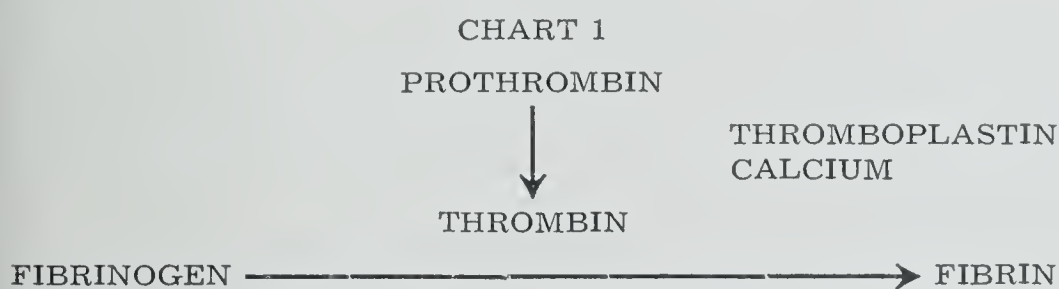
Birmingham, Alabama

As a result of recent experimental work, there has been much new information on the importance of the blood coagulation mechanism in obstetrics. Hemorrhage remains second only to infection as a cause of maternal death.¹ The newly acquired knowledge can go far in preventing this needless mortality.

Coagulation defects have complicated the following obstetrical conditions: 1) abruptio placenta, 2) amniotic fluid embolism, 3) retained dead fetus in utero, 4) eclampsia and preeclampsia, and 5) shock complicating any condition.

ETIOLOGY

A brief discussion of the etiology of the coagulation defect would seem germane. All elements necessary for the coagulation of blood are thought to be present in the circulating blood except thromboplastin. This substance initiates and accelerates the clotting process. If thromboplastin enters the maternal circulation, prothrombin is converted to thrombin and fibrinogen to fibrin.



This process causes the available fibrinogen to be used up, thus leaving the individual in a hypofibrinogenemic state. Depression of the fibrinogen renders the blood incoagulable. In 1886 Woolridge observed that slow intravenous infusion of thromboplastin, in the experimental animal, rendered the blood incoagulable.

Fibrinogen and prothrombin are known to be elevated during pregnancy. Recent work done by Alexander and his associates² has shown that proconvertin* is elevated in the pregnant female. The elevation of these elements renders the blood more sensitive to the action of thromboplastin.

The author is an instructor in the Department of Obstetrics and Gynecology, Medical College of Alabama.

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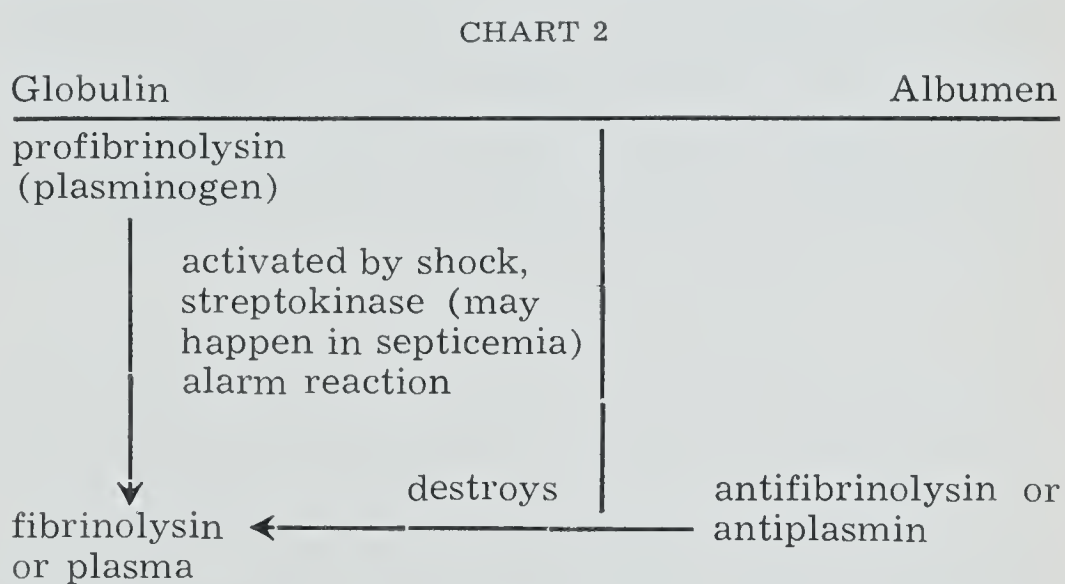
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*Also called pro-SPCA (serum prothrombin conversion accelerator).

Schneider³ has shown the blood of pregnant rabbits to be 2.4 times more sensitive to the action of thromboplastin than that of the non-pregnant rabbit. This hypercoagulable state is nature's way of preventing excessive blood loss at the time of delivery. It may also be the cause of the increased incidence of venous thrombosis as pointed out by Wessler.⁴

The logical question now is: How does thromboplastin find its way into the maternal circulation? It has been known for a long time that the placenta, amniotic fluid and fetal membranes are extremely rich in thromboplastin. In the pathological conditions mentioned, tissue juices rich in thromboplastin are squeezed into or absorbed by the maternal circulation. This then causes conversion of prothrombin to thrombin and fibrinogen to fibrin, thus using up the available fibrinogen. The fibrin is deposited in strands along the vessel wall. This has been called fibrin emboli by Schneider.³ This usually does not occlude the vessel lumen enough to produce symptoms of infarction.

In some cases it appears that activation of a fibrinolytic or proteolytic enzyme takes place. This enzyme is capable of causing lysis of fibrinogen and fibrin, thus making the blood incoagulable. It may be that this is frequently a secondary homeostatic mechanism to cause lysis of the fibrin emboli formed as a result of thromboplastinemia. This same sort of homeostatic mechanism is seen in resolving pneumonia where there is fibrin deposited in the lung. As shown in Chart 2 many



3. Schneider, C. L.: Complications of late pregnancy in rabbits induced by experimental placental trauma, *Surg., Gynec. & Obst.* 90: 613-622 (May) 1950.

4. Wessler, S.; Cohen, S., and Fleischner, F.: The temporary thrombotic state: Application of this concept to the theory of recurrent thromboembolism, with bacteriologic and roentgenologic considerations in the differential diagnosis of pulmonary infarction and pneumonia, *New England J. Med.* 254: 413-419 (March) 1956.

things, such as shock, will activate this proteolytic enzyme. An antienzyme is present in the albumen fraction of the blood. This antienzyme inactivates the fibrinolysin.

In cases suspected of coagulation defects, such as abruptio placenta, amniotic fluid embolism and retained dead fetus, no elaborate laboratory tests are necessary. A sample of venous blood may be collected in a clean test tube and observed for clot formation and retraction. If a firm clot forms within eight minutes, then one might assume the clotting mechanism is functioning properly. The clot should be observed further for evidence of lysis or fragmentation.

Serial specimens should be checked at intervals of at least 30 minutes until the obstetrical difficulty is resolved. The retained dead fetus syndrome is an exception because the condition is usually insidious rather than abrupt as in the other complications. It is thought that the fetus must remain dead in utero for at least four weeks before a coagulation defect would become manifest.

TREATMENT

Treatment for the coagulation defect is specific and dramatic. All of us who have seen massive hemorrhage respond within minutes to fibrinogen administration have been impressed. All communities should have fibrinogen available.* The dosage varies from 2 grams to 12 grams depending upon the severity of the depression. Concomitant administration of whole blood is usually indicated. Fresh blood is superior to bank blood because it is richer in fibrinogen and platelets.

Chart 2 shows that the antifibrinolysin is found in the albumen fraction of the blood. If there appears to be a lytic factor present, then administration of serum albumen would be indicated. Evidence of this would be subsequent dissolution of a stable clot. For practical purposes fibrinogen administration is indicated whether the coagulation defect is due to hypofibrinogenemia or the presence of a circulating fibrinolysin.

CONCLUSION

Hemorrhage continues to be a leading cause of maternal death. Recent knowledge pertinent to the clotting mechanism has shed new light upon the treatment of coagulation defects complicating pregnancy. Fibrinogen should be made available to all communities. It is felt that the maternal mortality resulting from hemorrhage can be reduced.

*Fibrinogen may be obtained through the American Red Cross centers in Birmingham, Alabama, and Mobile, Alabama. It may be purchased from Cutter Laboratories, Berkeley, California, as "Parenogen" or from Wm. S. Merrell Company in Cincinnati, Ohio, as "Fibrogen."

Tissue Storage of Metals Precedes Cancer Growth—Accumulation of specific metals in the tissues of patients with cancer appears to occur before the cancer develops rather than afterwards, according to a group of midwestern researchers.

Some researchers have thought high concentrations of trace amounts of metals are due to a secondary storage following the development of cancer.

The present study, however, suggested that the increase occurs prior to the growth of the tumor, because the researchers found an increased amount of metal in the lungs, kidneys, and liver, as well as in the tissues in which the cancer was primary.

Also suggesting a storage prior to the disease is the fact that the cancer tissues themselves have a much smaller amount of these metals than has the surrounding tissue, the researchers said in the December 28 Journal of the American Medical Association.

While they drew no conclusions about whether these high concentrations of metals actually play a role in causing cancer, they did point out that the relationship between metals and cancer needs more study. They suggested that researchers in other geographical areas make similar studies to see how they compare with the Chicago study.

The metals are accumulated from food and air taken into the body.

Some metals and their compounds, even when present in large amounts in the tissues, are known to have no cancer-causing properties, but there are a number with real or suspected carcinogenic properties. These include arsenic, chromium, molybdenum, nickel, cobalt, aluminum, beryllium, cadmium, silver, selenium, zinc, and metals with radioactive properties.

The researchers studied tissues taken from patients with cancer, patients with inflammatory diseases of the lungs, those with other diseases, and from healthy persons. They identified the metals in the lung, liver, kidney, and cancer-site tissues by using a spectograph. This microscope-like instrument indicates the kind and amount of metal present on the basis of the colors emitted by the metals.

The elements commonly elevated or high in liver, lung, and kidney of patients with cancerous diseases were tin, iron, cadmium, chromium, silver and silicon. In addition, manganese and beryllium were also elevated in the liver, and molybdenum in the kidney, the authors said.

Chromium, found in elevated amounts in the lung tissue and especially in the liver of patients with cancerous diseases in other organs, is a known cancer-causing agent. Lead, beryllium, and silver are credited with similar properties. This action has not been established with manganese, molybdenum, cadmium, and silicon.

Patients with inflammatory lung diseases had elevated levels of several metals in the lung tissues. It has long been known that a relationship exists between chronic inflammation and tumor-formation. Should elements be selectively stored in inflammatory tissues, they could be a positive factor in the development of a cancerous growth, they said.

The authors, Norbert W. Tietz, Ph. D., Edwin F. Hirsch, M. D., and Benjamin Neyman, Ph. D., conducted the study at the Henry Baird Favill Laboratory, Presbyterian—St. Luke's Hospital, Chicago. Dr. Tietz is now at Reid Memorial Hospital, Richmond, Ind.

BILATERAL CHARCOT NEUROPATHIC HIP ARTHROPATHY

KIRK R. DEIBERT, M. D., F. A. C. R.

Florence, Alabama

The purpose of this paper is to present the interesting features, both clinically and radiologically, of a case of bilateral Charcot neuropathic hip arthropathy. Sporadic reports appear in the literature of isolated single neurotrophic joint involvement and rarely a report reveals multiple sites of involvement. This patient, radiographically, had evidence of old malunited fractures of each femoral neck, partial hip dislocation and marked bony overgrowth (Figure 1).

Report of Case—A white obese housewife (J. L.), aged 55, whose first hospitalization was on May 2, 1953.

1. *Presenting Complaint*—Epigastric pain that varied from a dull type to sharp severe episodes occurring chiefly at night. This pain was encircling at each lower thoracic cage border and arose posteriorly to the inferior scapular margins. It did not bore through to her back from the epigastrium but after a severe attack her skin was hypersensitive. Large doses of morphia afforded no relief.

2. *Family History*—This was difficult to obtain. However, it was determined that her husband had a genital sore 24 years ago. She also developed a genital sore. Each one had a positive serologic test. He received intravenous and intramuscular injections for an entire year but she tired of them after receiving 9 injections and stopped taking them. She had 6 living siblings, and 2 deliveries resulted in non-viable births.

3. *Past History*—For the past 18 years she has been troubled with indigestion and postprandial eructation, made worse by a fatty meal. Episodes of nausea and vomiting would also occur. Four years after her initial scant series of injections, a repeat serologic test was reported to be positive. Then again she took 6 more injections and stopped. Eight and eleven years ago, respectively, she fell and broke the left and right proximal femurs. Approximately 12 years ago she received alternate intravenous and intramuscular injections continuously for one year. Five years ago the intermittent pain started at her waist. This was accompanied by episodes of severe pain that extended down each thigh and lower leg. She also experienced difficulty in walking, with instability of her gait.

4. *Physical Findings*—The cranial nerves were intact but there was limitation of the pupillary light reflex. Romberg +. There was a marked exaggerated bulge laterally over each greater femoral trochanter to yield a disproportionate increase to the transverse pelvic breadth. She had

an irregular waddle-type gait with a broad stance. Hyperesthesia was present at her waist level, and the abdominal reflexes were absent. There was a coarse tremor to the right hand, with hypoactive reflexes in the arm and adiadokocinesis.

5. *Laboratory Studies*—She had a moderate anemia. Kahn was negative. Examination of the spinal fluid revealed a negative Kahn, increased number of lymphocytes (100), protein 26 mgm.%. Icterus index 15.5.

6. *Radiologic Findings*—1. P. A. chest, negative; 2. Right shoulder, subdeltoid calcific tendinitis was present; 3. Lateral skull, dense thickening of the inner table, especially the frontal bone; 4. Thoracic spine, diffuse osteoarthritis; 5. Cholecystogram, normal; 6. Plain film of abdomen, negative except that the hip joints were included enough on the examination to reveal bilateral Charcot joints. Subsequent detailed examinations of each hip verified this. They also revealed the evidence of old ununited fractures of each femoral neck, with marked bony overgrowth at each intratrochanteric zone. Partial dislocations were present, more marked on the left side with the formation of a partial false joint (Figure 1, a & b).

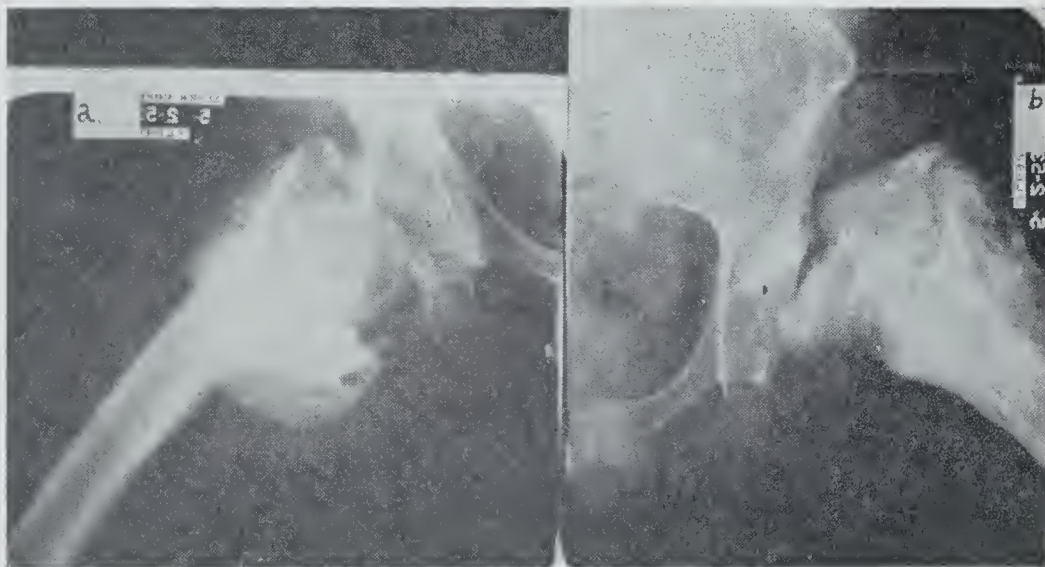


Fig. 1—Detailed radiographs of each hip. Bilateral Charcot neuropathic joints. The right side is shown as (a) and the left as (b). There is marked sclerotic bony proliferation incident to the old fractures. Partial dislocation is present at each hip. Bony destruction and juxta-capsular fragmentation is also to be noted.

7. *Neurosurgical Consultation*—Dr. William F. Meacham, Vanderbilt University Hospital, Nashville, Tennessee. Additional studies were obtained to include an intravenous pyelogram and a gastrointestinal study which were negative. Urinalysis, negative. Kahn serologic test negative, and similarly so for the cerebrospinal fluid. On the latter, the colloid mastic test was negative. Bence-Jones protein test negative, serum protein 7, albumen-globulin ratio 4.5/2.5, sodium 136 meq./L.

8. *Syphilologist Consultation*—Dr. Rudolph H.

Kampmeier, Vanderbilt University Hospital, Nashville, Tennessee. All of the above findings were verified by him and it was his opinion that Demerol should be used for pain, with large repeated doses of atropine sulphate.

9. The combined clinical impression is:

1. Fixed serologic-negative tertiary central nervous system lues.
2. Tabes dorsalis.
3. Severe gastric crises with lightning pains.
4. Bilateral Charcot neuropathic hip joints.

10. Clinical Progress—The patient was readmitted to the hospital on January 15, 1956. She had sustained another fall and fractured the mid-shaft of the right femur. She now complained of failing vision, and the intensity of the abdominal and leg pains had worsened. She had no relief from the lightning pains. A prefrontal lobotomy was proffered but refused. This current femoral fracture was of an abnormal and pathologic type. It was exactly transverse in the mid-shaft without fragmentation. After the patient was in traction for a period of three weeks, callus formation was present. By the time five weeks had elapsed a marked circumferential mass of callus formation had developed about the malapposed bony margins. Both of these features are abnormal, namely, the type of fracture and the callus exuberance. This copious callus formation is not encountered in an inactive female, aged 55.

11. Comment—The arthropathy of tabes dorsalis is most commonly observed in the knee. In my own experience I have seen bilateral knee involvement in one patient. Additional single joint involvement has been observed in a knee in one case, an ankle in another, and a hip in still another patient. The sixth patient presented extensive luetic osteoarthritis of the lumbar spine. Two cases of neuroarthropathy of the shoulder girdle have been identified, associated with syringomyelia. The humeral head was partially destroyed and dislocated. Surrounding soft tissue swelling was present in each case and small intracapsular osseous fragments were evident. They predominated in a dependent position.

Three cases of neuropathic and neurotrophic disturbance of the foot and ankle have been noted coincident to diabetes. Considerable bony and articular destruction has been present, associated with extruded bony fragments. Two cases have been observed that presented the typical trophic change of the phalanges coincident to peripheral neurovascular disturbance. One was due to leprosy and the other to Raynaud's disease. The finely pointed phalanges were present, with juxta-articular destruction. Following bulbar poliomyelitis and paraplegia, a diffuse osteoporosis is

encountered. In reference to the hips and ankles, quite frequently bone size, joint space and calcium density are reduced. Not uncommonly para-articular or juxta-articular ligamentous calcifications are seen. These are observations of interest for a differential impression in contrast to the case study presented.

Box 22, Rt. 1, Jackson H'way.

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Driver Training Would Lower Insurance Rates—Probably the best way to reduce automobile insurance rates is to teach teen-agers how to drive properly.

This would increase the number of accidentless drivers which would help reduce insurance costs, in the opinion of a New York high school teacher.

Writing in the December *Today's Health*, the American Medical Association's popular health magazine, David Star, Floral Park, N. Y., said training would also help reduce the rising number of fatal accidents involving drivers under 25 years of age.

Yearly 1,600,000 boys and girls reach legal driving age; 728,000 receive no training except what is picked up from friends and relatives.

"If everyone of our 1,600,000 16-year-olds passed a driver training course, we could in a generation put more than 30,000,000 drivers on our highways who had been trained in safe and skillful practices," Star said.

Since last February, Michigan has had a law that says no one under 18 can be licensed to drive unless he has passed an approved course of driver instruction. The cost of instruction in the high schools is provided for from licensing fees and the course requires a minimum of 30 hours of classroom instruction and six hours of driving.

Among the subjects taught are the motor vehicle's effect on social and cultural life; the driver's physical requirements, mental attitudes and social responsibilities; characteristics of streets and highways; legal structures and codes; automotive mechanics and maintenance; automotive consumer education, and skills in driving.

"We used to think anyone could just pick up driving, but we now realize that instruction and coaching are just as important in driving as they are in athletics, music, or bridge building," Star said.

"When a youngster just picks up driving, he usually acquires bad attitudes from his parents or other drivers. Faulty attitudes are much more often at the bottom of young driver accidents than lack of skill."

The more young drivers given knowledge and healthy driving attitudes at the beginning of their driving careers, the fewer unsafe drivers of all ages there will be in the years ahead, he concluded.

Activity Recommended as Fatigue Treatment—Rest is not “a universal panacea” for fatigue, even among aging persons, a New York physician said recently.

In many cases, activity is a better remedy, especially when the fatigue results from “atrophy of disuse,” Dr. Theodore G. Klumpp, president of Winthrop Laboratories, Inc., said.

In the absence of specific disease as a cause of fatigue, it arises in older persons from the normal physiological processes of aging which reduce the body’s endurance; from loss of incentive, motivation, and interest; from a decline of glandular activity, and from “atrophy of disuse.”

Fatigue is “a normal incident of normal living,” but when its pattern changes radically or it interferes with ordinary activities, it becomes a serious problem and needs medical attention, Dr. Klumpp said in the October 5 Journal of the American Medical Association. His article is one of a series on aging.

“For a long time, the approach to the problem of fatigue was thought to be simple. A brief history of the patient’s mode of life was obtained with one objective in mind—to cut out something.

“It made little difference how little the individual was doing—if the patient was tired, something had to go . . . if the patient did nothing more than sit in a rocking chair all day long, he was no doubt advised to stop rocking and go lie down,” he said.

Now physicians know better. Following the surgeons’ practice of getting patients up soon after surgery, they now prescribe physical activity.

The pattern of American life is specifically designed to avoid physical activity and stress—to the point where physical exertion is virtually eliminated, the author said. Young people are able to keep in relatively good physical condition through sports and play, but, as they grow older, they tend to give up these things. With the help of “labor-saving devices, now including electric golfmobiles,” they begin to suffer rapidly and too early in life from atrophy of disuse.

This brings with it a loss of muscular tone and functional reserve of all parts of the body, so that the slightest added stress causes undue fatigue. Maintaining an adequate physical reserve against stress is the best preventive for such fatigue.

Fortunately some degree of fitness can be regained through a program of graded exercise at any time, except where its loss is due to advanced organic disease. The exercise should be fun for the patient and should not be drudgery. Along with the exercise, the aging patient also needs an adequate amount of sleep at night and if necessary a short nap at midday.

Undue fatigue occurs more commonly among overweight persons. In addition to the obvious diet, the doctor should prescribe some type of exercise, despite the traditional “hearsay to the contrary,” Dr. Klumpp said. Its greatest value lies in its stimulating effect on endocrine gland activity and in overcoming the tendency “to sleep and snooze too much—a common counterpart of obesity.”

Dr. Klumpp also noted that much fatigue in aged persons occurs because they lose their incentive and interest in life. Then the doctor must help the patient find a “new and absorbing interest.”

Nervous Tension May Cause Hyperthyroidism Symptoms—Patients who appear to be suffering from overactive thyroid glands actually may have “nicotinitis” or “coffeeitis,” in the opinion of a Wisconsin doctor.

Writing in the November 23 Journal of the American Medical Association, Dr. Arnold S. Jackson, Madison, Wis., discussed 228 cases in which the ailments were misdiagnosed as hyperthyroidism.

Of these, 112 patients had normal thyroid gland activity, but were nervously exhausted or under great tension. Thirty had menopausal symptoms, 27 were physically exhausted, and the others had a variety of ailments.

Among the 112 patients with a nervous basis for their symptoms, the most important single factor responsible was overindulgence in the use of stimulants—coffee, tea, and nicotine, Dr. Jackson said. In fact, the use of stimulants was so important and occurred so often, the terms “coffeeitis” and “nicotinitis” were coined to express the trouble.

Many patients were consuming large doses of barbiturates, tranquilizers, and other drugs in an effort to combat the nervous stimulation and its resultant nervous tension, palpitation of the heart, tremor, insomnia, and weight loss.

The effect of withdrawing these drugs and restoring the patient to a normal routine was dramatic, he said.

The symptoms of an overactive thyroid may be confused with those of nervous exhaustion, although there are distinguishing factors, Dr. Jackson said. Weight loss, heart palpitations, moist warm skin, prominence of the eyes, tremor of the fingers, nervousness, and insomnia, may occur with hyperthyroidism or nervous prostration.

However, in weight loss from hyperthyroidism, the patient does not usually lose his appetite as he does in nervous exhaustion. In hyperthyroidism, there are characteristic changes in blood pressure and weakness of certain muscles which do not occur in the other condition.

Dr. Jackson noted that basal metabolism tests, the common test for thyroid activity, often may be inaccurate. This frequently occurs because the patient is nervous and breathes faster during the test than he normally does. The test is based on the individual’s use of oxygen.

Before a physician makes a diagnosis of hyperthyroidism on the basis of the metabolism test, he should consider the other physical signs of weight loss, blood pressure, and muscular weakness, Dr. Jackson said. In addition, he should make sure that nervous tension and exhaustion are not the causes of the symptoms.

He noted that emergency surgical removal of the thyroid gland is frequently recommended for hyperthyroidism. The operation should never be considered an emergency. Time must be taken to make certain that the patient actually has an overactive thyroid gland and is not suffering from some other condition. Once a diagnosis of hyperthyroidism is established, then an operation is in order, he concluded.

Dr. Jackson is associated with the Frieda Meyers Nishan Foundation for the study of goiter at the Jackson Clinic, Madison.



Editorials

ALLERGIC REACTIONS TO INFLUENZA VIRUS VACCINE

(A release of the American Foundation for Allergic Diseases)

Monovalent influenza virus vaccine, Asian strain, is rapidly being made available in adequate supply. Among the millions of individuals expected to receive this vaccine will be some with varying degrees of sensitivity to the egg protein which is found in this and certain other vaccines prepared from egg-cultured viruses.

It is generally agreed that individuals who in any way indicate that they are allergic to egg-protein should not receive influenza inoculations, since the risk of producing a serious allergic reaction will ordinarily outweigh the risk of serious consequences from an attack of the Asian influenza, which so far has been a relatively mild and self-limited disease in the United States.

The American Foundation for Allergic Diseases is aware that it is common practice for the physician to ask his patient if he has any allergy or sensitivity to egg protein before such vaccines are given. Each vial of the new influenza vaccine contains a reminder on this point. However, because inoculations will be given in great numbers and possibly by nurses and technicians the Foundation is underscoring caution as regards the individual allergic to egg protein. The mass vaccination aspect increases the chance that patients with definite egg-protein sensitivity may present themselves for vaccination, unaware of this allergy, or careless in communicating to the physician that they have previously experienced sensitivity to eggs.

Allergic reactions due to egg hypersensitivity may occur following the injection of virus vaccines in persons of any age, but they are more common and apt to be more severe in young children. The injection of egg protein as a diagnostic procedure in very sensitive children has resulted in severe anaphylactic shock.

Ratner and Untracht found that one out of five allergic children exhibit dermal sensitivity to egg protein and this sensitivity is of clinical significance in about one out of 20 such allergic children. Practical clinical experience indicates that allergic

reactions to virus will be encountered in fewer than one out of every several hundred persons receiving the vaccine, when, as is anticipated with the influenza vaccine, millions are inoculated. The majority of egg-protein allergies will be mild. Dangerous reactions are extremely rare.

Much of the difficulty will be avoided as the physician exercises caution in determining egg-sensitivity. Where there is doubt or the physician feels it is important to establish that tolerance exists, the patient may be given an intradermal test with the vaccine itself. This should be performed with a 1:10 dilution, since undiluted vaccine produces a mild local reaction in nearly everyone. If a systemic or a severe local reaction occurs in response to the intradermal test, sensitivity is indicated and the vaccine should not be given. The test itself should, of course, be administered with caution.

A burning sensation at the site of injection and a mild febrile reaction may occur in some individuals receiving the vaccine and should not, by themselves, be misinterpreted as signs of an allergic response.

Physicians administering the vaccine will customarily have antidotes for allergic reactions conveniently at hand, and patients suspected of sensitivity may be observed in the office or clinic for half an hour after injection. The physician may wish to prescribe a tablet or capsule of a potent antihistaminic which the patient may take if a delayed reaction should occur.

FELLOWSHIPS IN INDUSTRIAL MEDICINE

The University of Cincinnati's Institute of Industrial Health is offering graduate fellowships in industrial medicine. The Institute, which is in the Graduate School of Arts and Sciences, provides professional training for graduates of approved medical schools who have completed at least one year of internship.

The three-year course of instruction, leading to the degree of Doctor of Science in Industrial Medicine, satisfies the training requirements for certification in Occupational Medicine by the American Board of Preventive Medicine. Two years are devoted to intensive academic and clinical

cal study in the field of industrial medicine. A final year is spent in residency in an industrial medical department or in some comparable organization.

Stipends for the first two years vary from \$3,000 to \$4,000 depending on marital status. In the final or residency year, a fellow is compensated by the organization in which he is completing his training.

A one-year course is also offered to qualified applicants with a possibility of a Master of Science degree.

Requests for additional information should be addressed to Secretary, Institute of Industrial Health, College of Medicine, Eden and Bethesda Avenues, Cincinnati 19, Ohio.

CHOLESTEROL-DIET RELATIONSHIP

The cholesterol level in the blood can be kept down within reasonable limits by diets which still contain lean meat, dairy products, eggs and fats if adequate amounts of certain vegetable oils are also included, Dr. Dorothy Rathmann told the Industrial Hygiene Foundation at its 22nd annual meeting.

The information is of particular significance for those with heart disease, those who are hypercholesteremic, or for those with a family history of atherosclerosis. It was the high point of a round-up made by Dr. Rathmann of the intensive research conducted in the past few years on the relation of dietary fats to human blood cholesterol levels. It is generally agreed that the research is opening new approaches to nutrition that will affect all of us. But, meantime, it has special meaning for those with coronary difficulties, since it is generally agreed that a high blood cholesterol level has some relation to heart attacks, although the exact connection is as yet unknown.

Whereas it used to be thought, Dr. Rathmann pointed out, that coronary patients should be placed on low-cholesterol diets, further study demonstrated that the human body normally manufactures cholesterol, so that even a diet containing absolutely no cholesterol may not materially change the quantity of cholesterol in the blood and tissues. Today emphasis has swung away from low-cholesterol, low-fat diets, except for special cases, Dr. Rathmann reported. "We now have good reasons for believing," said Dr. Rathmann, "that a moderate fat intake is desirable and that there are significant differences between the effects of various types of fat on the serum cholesterol levels. In fact, by proper choice of the dietary fat, lower cholesterol levels may be achieved on fat-containing diets than on fat-free diets, even when as much as 70 per cent of the total calories is derived from fat."

Dr. Rathmann reviewed the numerous studies that were first brought to the attention of the medical world in recent years, which pointed to the tendency of certain unsaturated vegetable oils actually to lower the blood cholesterol level. Even more recently, these studies have been confirmed and extended by medical and biochemical investigators working in the United States, Sweden, Canada, England and South Africa.

These carefully controlled studies on human beings with single types of fats have led to the conclusion that mere removal of animal fat from the diet "does not achieve as great a lowering in the serum cholesterol levels as does the partial replacement of the animal fat with the appropriate vegetable oil."

The degree of unsaturation and the linoleic acid content play a part in this action of the vegetable oils, said Dr. Rathmann, but they do not appear to be the complete answer.

"Corn oil, for example, is more effective than would be expected from either its iodine value or linoleic acid content," said Dr. Rathmann. Because corn oil seems to be more effective than all other vegetable oils in lowering the cholesterol level, it has become the standard of comparison in most research that is still being exhaustively pursued in quest of a final explanation.

These findings do not mean, of course, said Dr. Rathmann, "that we can eat a high calorie-high fat diet and get the desired effect by merely taking a couple of swigs of vegetable oil daily. . . . Instead, the unsaturated oils must be used in place of a portion of the more saturated fats."

This is a highly complex problem, Dr. Rathmann emphasized, and it must not be forgotten that many of the important protective foods that raise the serum cholesterol level also provide the high quality protein so essential for good nutrition. The thing to strive for is a balance, through adequate amounts of the more highly unsaturated vegetable oils. Excess calories, regardless of the type of food, seem to increase the cholesterol levels.

For practical purposes, Dr. Rathmann recommended that: 1. total caloric intake should be adjusted to the individual's needs; 2. fats should provide 25 to 30 per cent of the total calories; 3. particularly for hyper-cholesterolemic persons, or those with heart disease, or those with a family history of atherosclerosis, unsaturated vegetable oils may advantageously be used in place of a substantial portion of the more saturated fats.

Dr. Rathmann is a biochemist for many years associated with the University of Rochester and the Mellon Institute. She is now associated with the research department of the Corn Products Refining Company.

BED REST IN TUBERCULOSIS

(A release of the American College of Chest Physicians)

There has been some moderate relaxation in the strictness of the application of bed rest in the treatment of pulmonary tuberculosis since the advent of antituberculosis chemotherapy, but it is generally considered as a basic requirement of therapy. This is true in spite of deliberate programs in some areas to deemphasize the importance of bed rest for the purpose of investigation.

In discussions of the treatment of tuberculosis, the intense interest in methods of use of the various drugs has occupied the attention of the phthisiologist to such a degree that little has been said about the need of rest as a basic part of therapy. To the men in active practice of chest diseases this need is generally understood and accepted, but to the person who casually reviews the literature it is easy to gain an erroneous impression regarding the over-all program of tuberculosis treatment. Since an increasing amount of tuberculosis is being cared for by those not specially trained in this disease, the lack of information regarding the whole treatment picture can lead to disastrous results. It is felt that a strong statement should be made reaffirming the importance of bed rest and its proved value in the regimen of tuberculosis treatment and that this statement should receive the widest possible attention. It is believed that bed rest should be maintained until the lesion is stabilized, as indicated by bacteriologic, x-ray, and clinical evidence.

The desirability of at least starting the patient's care under sanatorium conditions for the purpose of patient indoctrination, the evaluation of his clinical problem and the initiation of the various therapies is also reaffirmed.

WHAT DOES YOUR PATIENT READ?

Have you taken a moment lately to check the reading material in your waiting room? If so, does it include issues of *Today's Health*, published by the AMA—the magazine which never goes out of date, and which is one of the most popular on the reading table?

Why Have *Today's Health*?—If you have had occasion lately to examine the so-called "popular health magazines" which are offered on the newsstands to the general public, you will say, "Thank goodness for *Today's Health* magazine as an antidote to that type of misleading, and so often inaccurate, health information."

Today's Health is published by the American Medical Association for the express purpose of putting authentic health information into the hands of America's reading public. Its colorful covers are always eye catching, the format is modern and appealing, and its articles are written by

competent authorities in a very readable and understandable way. There is no better investment in the health education of your patients than to make sure copies of *Today's Health* are available to them in your waiting room. This monthly magazine and its value as a stimulant to good doctor-patient relationship cannot be over-estimated.

Is the Patient Interested in Health Subjects?—Yes, very much so, as witnessed by the overwhelming popularity of syndicated columnists such as Dr. Alvarez, the high ratings of such television programs as *Medical Horizons*, and even the very popular comic-strip character, Rex Morgan, M. D. Also, the fact that the patient is in your waiting room means that he has a very subjective interest in his own health at the moment and for that reason is most susceptible to magazines with subjects dealing with health. You should make sure that the material he reads is authentic and accurate.

C. Joseph Stetler, Chicago, director of the AMA's law department addressed the Jefferson County Medical Society and the Northwest Division of the State Medical Association in Birmingham on November 4th. Mr. Stetler said, "Americans may get less effective medical care in the future if the tendency to sue a doctor continues." Stetler had no clear-cut answer as to why there is a growing tendency among patients to sue doctors, but he did observe that "Unfavorable articles in lay magazines have created antagonism toward the physician."

Who Sells *Today's Health*?—The promotion of good health education in the community is one of the main projects of the Woman's Auxiliary to the American Medical Association. For that reason, every local and state Auxiliary has a *Today's Health* Chairman. It is her job, and her committee's job to promote subscription drives and to follow up the renewals. So when your local Auxiliary gets in touch with you to take out a subscription or renew your subscription, give it your wholehearted support. The Auxiliary is doing a big job in the interest of community health.

How Much Does It Cost?—Physicians, dentists, Auxiliary members, residents, interns, and medical students are entitled to buy a subscription at the special rate of \$1.50 per year. It is sold at the regular price of \$3.00 per year to all other individuals, schools, libraries, etc.

Next time a copy of *Today's Health* comes your way, really take a good look at it and see if you aren't pleased with the kind of publication the AMA puts out for the American reading public. Do your AMA a favor and support it with your subscription. Do your patients a favor and give them good reading material and, most of all, do yourself a favor by subscribing to *Today's Health*.

MEETINGS

AMERICAN COLLEGE OF SURGEONS MEETING

The Alabama Chapter of the American College of Surgeons will hold its Seventh Scientific Meeting on Friday and Saturday, January 31 and February 1, at the Grand Hotel, Point Clear, Alabama.

The scientific program will include: "Management of Arterial Injuries" by Dr. Sterling Edwards, Birmingham; "Surgical Management of Thyroid Disease" by Dr. John V. Goode, Dallas, Texas; "Surgical Management of Ulcerative Colitis" by Dr. Mark M. Ravitch, Baltimore; "Some Problems in Biliary Tract Surgery" by Dr. John M. Slaughter, Fairfield; "Stricture of Common Duct, Etiology, Prevention and Surgical Treatment" by Dr. Harwell Wilson, Memphis; "Acute Pancreatitis and its Complications"—a panel, moderated by Dr. Champ Lyons, Birmingham, with Dr. John V. Goode, Dr. Edward S. Judd, Dr. Harwell Wilson and Dr. Mark M. Ravitch as discussants; "Air Embolism" by Dr. Henry Hollenberg, Little Rock; "Evaluation of Current Surgical Therapy for Gastric and Duodenal Ulcer" by Dr. Edward S. Judd, Rochester, Minn.; "Endometriosis" by Dr. Conrad G. Collins, New Orleans; and "Surgical Management of Esophageal Hiatus Hernia" by Dr. Charles J. Donald, Jr., Birmingham.

Dr. George W. Stephens, Assistant Director of the American College of Surgeons, will speak at luncheon on the first day. His subject will be "American College Activities, with Report from Headquarters." Dr. Josiah Smith, Selma, will preside at the banquet which is to be held on Friday evening. Mr. Tom Sims, Ohatchee, will be guest speaker and his subject will be "Forty Acres in Alabama."

Entertainment for ladies has been planned. Also, there will be golf on Saturday afternoon and dancing Saturday evening.

All members of the State Medical Association are cordially invited to attend.

ATLANTA GRADUATE MEDICAL ASSEMBLY

The Atlanta Graduate Medical Assembly will be an event of February 17-19 at the Atlanta Biltmore Hotel. The prospectus states "it would be hard to find a more authoritative, accomplished, dynamic and provocative speaking faculty for a graduate medical assembly." The Assembly carries a 15 hour Category One approved by the American Academy of General Practice.

GENERAL PRACTITIONERS TO MEET

The Alabama Academy of General Practice will hold its sixteenth postgraduate seminar at the Medical Center, Birmingham, January 15-16, 1958.

The annual business session, with election of 1958 officers, will be held. Also, the group will meet at its annual banquet, at which the Senior students of the Medical College of Alabama and their husbands and wives will be special guests. Dr. Louis F. Rittelmeyer, Jr., University of Mississippi, will be guest speaker.

The Wednesday program includes the following discussions: *Diagnosis and Treatment of Drug Reaction* by Dr. James Pittman, Birmingham; *Pleural Effusion in Heart Disease* by Dr. J. B. Burrett, Birmingham; *Cause and Persistence of Urinary Tract Infection* by Dr. Landon Timberlake, Birmingham; *Symposium on Alcoholism* (1) Medical Approach to Alcoholism, and (2) Medical Treatment of Alcoholism, by Dr. Marvin A. Block, Buffalo, New York.

On Thursday the group will hear discussed *Diagnosis and Treatment of Portal Hypertension* by Dr. Thomas Patton, Birmingham; *Diagnosis and Treatment of Pelvic Pain* by Dr. W. N. Jones, Birmingham; *Diffused Pulmonary Tuberculous Disease* by Dr. A. J. Viehman, Birmingham; and a live clinic demonstration and discussion of clinical cases in which Dr. Tinsley R. Harrison, Dr. William Hammack, Dr. S. R. Hill and Dr. Ben Branscomb, all of Birmingham, will participate.

All Alabama physicians are invited to attend.

ALABAMA ACADEMY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY

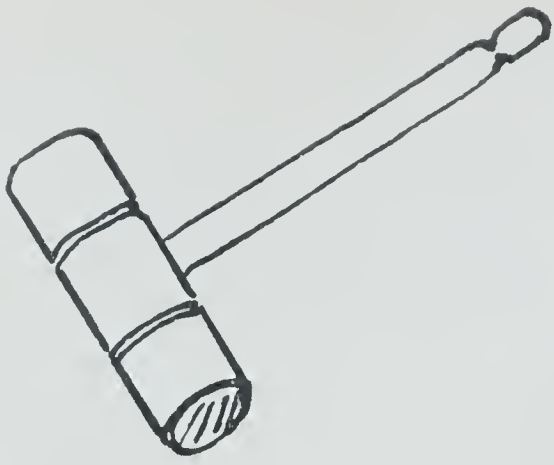
The Alabama Academy of Ophthalmology and Otolaryngology will meet at the Grand Hotel, Point Clear, Alabama, on January 31 and February 1, concurrently with the Alabama Chapter of the American College of Surgeons. The meeting will be in the Director's Room of the hotel and will be presided over by the Academy's president, Dr. Thomas O. Paul of Birmingham.

On the opening day, Dr. Richard Farrior of Tampa will discuss plastic repair in the field of ear, nose and throat; Dr. Graham Clark of New York, retinal detachments, treatment and complications; and Dr. Eugene Derlacki of Chicago, pediatric otology. There will be a lunch and round table discussion at noon, a social hour at 6:30, and banquet at 8 with the General Surgical Section.

The second day will bring back Dr. Farrior and Dr. Clark for a continuation of their discussions; and Dr. Derlacki will give his early impressions of tympanoplasty under pediatric otology. The meeting will conclude with a noon luncheon and business meeting.

POSTGRADUATE COURSE ON DISEASES OF THE CHEST

The Fourth Southern Postgraduate Course on Diseases of the Chest will be held at Grady Memorial Hospital, Atlanta, Georgia, March 10-14, 1958.



President's Page

In the P. R. Notes of Dec. 2, 1957 your attention was called to the Forand Bill (H. R. 9467) for hospitalization and medical benefits under social security. It offers 60 days of hospitalization, plus surgical benefits, and an additional 60 days of nursing home care, to all social security beneficiaries 65 years of age and older, and the same benefits to their survivors and dependents. This covers a broad segment of population of the U. S. which expands with each year. This is true socialized medicine and should be opposed at every level by the medical profession. The A. M. A. is taking aggressive action in this direction but we all know that political influence is started at the constituent level of every member of Congress. We must let our representatives know our feelings. If the above group is added to the 22,641,000 veterans in civilian life who might be eligible now or later for government care, approximately one half of our national population will be included.

In October the Michigan State Medical Society made a public opinion survey of Prepaid Medical Care Coverage in Michigan. Eighty one percent of the population of Michigan is covered by some form of health insurance. The vast majority are satisfied with the situation, according to the survey. Of those covered 64.6% have Blue Shield. 64% liked it and 26% were noncommittal. Blue Shield subscribers believe they pay an average of \$5.95 a month for medical and surgical coverage. The actual average is \$2.83. The majority are willing to pay up to \$6.95 a month in order to obtain additional benefits.

The added benefit most people would like to have is diagnostic service in hospitals.

The Michigan House of Delegates on September 25 outlined broad principles in alteration of the Blue Shield program reflecting the wishes of the public and doctors concerned with prepayment health insurance plans: 1) Broader benefits for subscribers; 2) A deductible and co-insurance type of contract, providing full payment for some services and partial payment for others; 3) An increased income-limit clause so that Blue Shield

will cover the major costs for families up to \$7,500 of annual income; 4) Adoption of a series of unit values for various phases of medical care, including work by the family doctor, diagnosis, x-rays, surgery and all other treatment; 5) Endorsement of other insurers who want to set up the same type of coverage as Blue Shield, provided they live up to specified criteria.

"A Country Doctor and the National Health Service" printed in G-P, August 1957, Volume XVI, number 2, should be read by all physicians. It is only human that we often fail to follow experiences of other medical organizations in the world but we could prevent many of our problems if we were more alert.

Britain has had 9 years of National Health Service and Socialized Medicine. The above article will impress upon you that all the predicted defects in such a system have shown up. Could you conscientiously provide quality medical care and support your family on being paid \$2.38 per year for each 1750 patients for all medical care services rendered by you? Space will allow only mention of a few items: 1) Mileage allowance unchanged. 2) Frozen in location. 3) Patients' attitude deteriorates. 4) Malingerers multiply. 5) Regulating bodies are non-medical. You probably will not sleep well after reading the above article but it is *later than you think in America*.

You might be impressed by what has happened to your tax dollar. In 1932 the federal tax was 22.7% while state and local taxes were 77.3%. In 1940 the federal tax had moved up to 38.6% and state and local taxes had changed to 61.4%. In 1957 the federal tax takes 73% while state and local taxes are only 27.0% of your tax dollar.



ORGANIZATION SECTION

REPORT FROM THE COMMITTEE ON LEGISLATION

As this issue of the Journal goes to press, it is not known what the outcome will be when the votes are counted for and against the four Association supported amendments on which the people will vote December 17.

On November 17, the Committee on Legislation voted to institute a program which would give active support to Amendments 3, 4, 6 and 10. The program included:

(1) making a flyer available to all Association members and urging its use with patients and friends;

(2) sending a letter to each County Medical Society urging that the Society engage in a four-point program including (a) passing a resolution in favor of the amendments and getting this to the newspapers, (b) urging its members to "talk up" the amendments, (c) buying radio and/or TV spots, and (d) approaching their local legislators to see what help they could offer; and

(3) purchasing one ad favoring the amendments in 50 weekly and 3 daily newspapers just prior to the election.

On November 18, the program was cleared with the State Board of Censors and action commenced.

The following day, P. R. Notes were devoted exclusively to the four health amendments. A copy of the "Vote Yes" flyer referred to in (1) above was attached, as was a postal card for ordering additional copies. P. R. Notes were sent to members of the Woman's Auxiliary for the first time. (They will receive future issues for a year's trial period.)

Approximately 6,000 copies of the "Vote Yes" flyer were ordered and shipped from the state office.

On November 18 a letter was written to the president of each County Medical Society, with a copy to the secretary, urging each group to participate in the project to the best of its ability.

County Medical Societies were visited by state office personnel in an effort to engender interest in the program. Only the limitation of time prohibited a visit to every Society in the state.

Radio and TV spots were purchased and used.

Legislators were contacted.

Friends were asked to consider the amendments seriously and not simply to block them in with the total of 25 to be voted on.

And the ad was run in the 50 weekly and 3 daily newspapers. Newspapers were selected to give complete coverage of the state.

As stated in the meeting of the Committee on Legislation, the health amendments gave an opportunity for the Association to go on record for a positive program that would be of value to the people of the state. The Committee on Legislation, with the help of state office personnel, made every effort to assure passage of the four health amendments; and it is hoped that before this Journal is mailed they will be law.

ALABAMA CENTRAL CANCER REGISTRY BEING PLANNED

Plans are underway to establish a Central Cancer Registry in Alabama. The purpose of such a registry will be to register and secure follow-up data on as many patients as possible who develop cancer in the state.

The unique opportunity afforded in this state was noted about one year ago. The State Pathologists' Cancer Registry has been in operation since 1948. All pathologists in the state have cooperated by sending a copy of the pathologist's report and a duplicate histologic section on every cancer diagnosed by them, in an Alabama resident, since that time. This affords an invaluable nucleus of material. The Pathologists' Registry has not conducted complete routine follow-up which is a most important function of a clinical cancer registry.

Cancer being a chronic disease, in which varied modalities of treatment are used, it is essential that hospitals treating cancer have some system whereby all cancer patients can be registered and nearly 100 per cent follow-up obtained to evaluate results. The Committee on Cancer of the American College of Surgeons has been most vocal on this subject and has encouraged hospitals treating cancer to establish cancer registries.

Until recently there were no hospital cancer registries in Alabama. Several hospitals in the state have indicated an interest and desire to establish one. With the material in the State Pathologists' Cancer Registry it became evident to

the Cancer Control Committee of the State Medical Association that it would be relatively simple to establish a Central Cancer Registry. This would involve the adoption of forms which could be used by each hospital in the state that wished to establish a cancer registry. Duplicates of this form could be forwarded to the Alabama Central Cancer Registry. By the use of a code and punch cards the Central Registry could compute data on cancer which would be readily available to the individual hospitals and for statewide cancer studies.

The State Cancer Committee asked and was granted permission by the State Medical Association to investigate the possibility of establishing a Central Cancer Registry. The Alabama Association of Pathologists was magnanimous in offering to relinquish the Registry which they have created and cooperate in the effort to expand. The major medical groups in the state have been equally enthusiastic and pledged full cooperation.

Apropos of the above need and interest, the Cancer Control Committee of the Association, under the chairmanship of Dr. W. Nicholson Jones, contacted the administrative officials of interested medical organizations. The following were appointed to serve on an advisory council to formulate a plan of action:

Alabama Association of Pathologists—Beulah M. Hathaway, M. D.

Cancer Control Division, State Health Department—W. H. Y. Smith, M. D.

Alabama Chapter, American Academy of General Practice—Leslie H. Hubbard, M. D.

Alabama Division, American Cancer Society—Mrs. Lillian G. Meade.

Alabama Chapter, American College of Chest Physicians—Charles J. Donald, Jr., M. D.

Alabama Chapter, American College of Surgeons—William A. Maddox, M. D.

Alabama Diabetes Association—No appointment to date.

Alabama Division, International College of Surgeons—Gilbert F. Douglas, Sr., M. D.

Alabama Heart Association—William D. King, M. D.

Alabama Orthopaedic Society—No appointment to date.

Alabama Pediatric Society—No appointment to date.

Alabama Radiological Society—P. A. Morgan, Jr., M. D.

Alabama Society of Anesthesiologists—Robert W. Grady, M. D.

Alabama Society of Internal Medicine—No appointment to date.

Alabama Urological Association—Bruno Barelare, M. D.

Alumni Association, Medical Department, University of Alabama—Gilbert F. Douglas, Sr., M. D.

The Alabama Association of Obstetricians and Gynecologists—W. Nicholson Jones, M. D.

Woman's Auxiliary to the Medical Association of the State of Alabama—No appointment to date.

This Advisory Council, with members of the Association's Cancer Control Committee, met in

Montgomery, Alabama, November 10, 1957. It was decided that the establishment of a Central Cancer Registry can be accomplished at this time. This registry will be under the aegis of the Cancer Control Division of the Alabama State Board of Health. It can best serve its purpose if located in Birmingham, Alabama. The present quarters occupied by the State Pathologists' Registry in the Hillman Building of the Medical Center would be sufficient for a while. The plan adopted was to move to a public health facility, preferably the Jefferson County Public Health Building, as soon as space is available. The present personnel in the Pathologists' Registry will be adequate to begin with.

An Executive Committee, consisting of the following members, was appointed to investigate details and report back to the Advisory Committee:

William A. Maddox, M. D., Chairman.

Beulah M. Hathaway, M. D.

P. A. Morgan, Jr., M. D.

W. H. Y. Smith, M. D.

Leslie H. Hubbard, M. D.

Mrs. Lillian G. Meade.

Mr. George A. Lerraigo.

Details of the above objectives are being studied. Help from the Statistical Division of the American Cancer Society has been offered. It is hoped that within the next few months an Alabama Central Cancer Registry can begin operation.

Individual hospitals will be encouraged to establish cancer registries and the Central Cancer Registry will be able to give advisory aid.

MEDICAL ASSISTANTS COURSES

In October 1957 the Committee on Public Relations approved the establishment of a course for medical assistants to be conducted in all off-campus centers of the University of Alabama.

Dr. J. O. Colley, Jr., Chairman of the subcommittee charged with the responsibility of initiating the course, presented a proposed program to representatives of the Extension Division of the University of Alabama.

After considering the program from all angles, it was decided that from the practical standpoint it would be good judgment to conduct the course one night a week for a period of nine to ten weeks. In this manner it was felt that a more concentrated program would evolve and a broader range of subject matter would be permitted.

The University of Alabama and the State Medical Association jointly presented the following proposed program:

I. Background:

A. Approval has been given to institute a course for Medical Assistants in each off-

campus center of the University of Alabama.

- B. Representatives of University of Alabama and the M. A. S. A. met and a program worked out.
- C. Currently, classes are under way in Birmingham and Gadsden with a total of 103 enrolled.

II. Proposed:

- A. Establish this course in the other centers of the University of Alabama.
 - 1. Contact Director of each center through County Medical Society and outline possible program.
 - 2. Send letter to doctors in each area informing them that the M. A. S. A. endorses and encourages such a course.
 - a. Survey doctors by letter to determine whether or not they will support such a program if the University Center in that area so desires.
 - 3. Offer the assistance of the M. A. S. A. in any other way that it can help.
- B. A long range program.
 - 1. Repeat introductory course as needed.
 - 2. Offer advanced instruction if interest merits.
- C. Endeavor to set same type course in the outlying cities throughout the state.

III. Objectives:

- A. To train medical assistants to a degree of proficiency.
- B. Promote adult education.

The Birmingham Center was instrumental in offering the first course. A group of Medical Assistants in that area banded together in full support of the program. Total enrollment—63. Because of the success in this initial endeavor, representatives of the Birmingham Center and the State Medical Association contacted the other centers in the state and outlined a similar program. The Gadsden Center then began to make plans. On November 14, 1957, forty persons were present for the first meeting.

The Montgomery Center plans to begin the course this month, and a survey of doctors has been made in the Huntsville area to determine the interest there. The Mobile and Dothan Centers are considering a similar series of lectures.

It is the desire of the Committee on Public Relations that this type service be made available to every section of the state where there is enough interest. The full cooperation of doctors is imperative to the success of this program.

Following is an outline of the course which is currently being held in Birmingham:

INTRODUCTORY COURSE FOR MEDICAL ASSISTANTS

Presented by

University of Alabama
Birmingham Center

Session 1 Human Relations—"Knowing Yourself." Dr. George E. Passey, Professor of Psychology, University of Alabama.

Session 2 Human Relations—"Understanding Others." Dr. George E. Passey, Professor of Psychology, University of Alabama.

Session 3 "Office Organization and Procedures." Dr. Wilson Ashby, Head, Department of Secretarial Administration, University of Alabama.

Session 4 "Office Organization and Procedures." Dr. Wilson Ashby, Head, Department of Secretarial Administration, University of Alabama.

Session 5 "Use of the Telephone and Office Communications." Mr. Bert Smith, Customer Relations Representative, Southern Bell Telephone Company.

Session 6 "Sources of Medical Information." Mrs. Sarah C. Brown, Librarian, University of Alabama Medical Center.

Session 7 "Medical Terminology." Dr. Ben Moffett, Professor of Anatomy, University of Alabama Medical Center.

Session 8 "Medical Terminology." Mrs. Sarah C. Brown, Librarian, University of Alabama Medical Center.

Session 9 "The Medical Assistant as a Member of the Health Team." Dr. E. B. Glenn, President, Jefferson County Medical Society, Birmingham Medical Center.

Session 10 "Professional Training and Education for the Medical Assistant." Dr. Richard T. Eastwood, Director, University of Alabama, Birmingham Center.

Place: University of Alabama Birmingham Center, 720 South 20th Street, Birmingham, Alabama.

Time: Ten Meetings, October 8—December 10, 1957, 8:00-9:30 p. m.

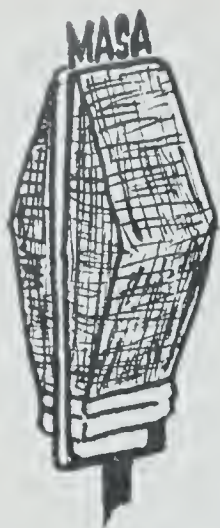
Cost: Course Fee, \$10.00—Registration Fee, \$2.00.

MEDICOLEGAL FORMS

Dr. J. O. Morgan, Chairman, Committee on Insurance, wishes to call attention of members to the booklet "Medicolegal Forms with Legal Analysis." The booklet includes text material and sample forms which have been prepared by the Law Department of the American Medical Association to assist and provide a measure of protection to physicians in their office and hospital practice. It is not intended, nor will it serve, as a substitute for individual legal counsel.

Requests for copies should be addressed to the Law Department of A. M. A.

Under Association Forum in this issue is a paper by Mr. C. Joseph Stetler, Director of A. M. A.'s Law Department, which should be of vital interest to every member of the Association.



ASSOCIATION FORUM

MEDICAL PROFESSIONAL LIABILITY

Before joining the A. M. A. legal staff several years ago, I had the definite impression that physicians, in common with clergymen and ministers, were seldom involved in litigation. I have since learned that this is certainly not the case. Doctors are familiar figures in the courtroom today, not only as medical witnesses but as litigants. I can assure you also of a fact, which you know better than I, that there is a great reluctance on the part of doctors to become involved in legal affairs. Their participation in these activities is not by design. They are something like the small boy who went fishing and fell in the river. He was found by his father floundering in the water and after he was pulled out his father said, "Son, how did you *come* to fall in the river?" The boy answered, "I didn't *come* to fall in the river, I *came* to fish." Doctors didn't study medicine to become involved in legal affairs; however, they are in the water like the small boy and it is imperative that they learn how to swim. It behooves them to learn how to perform their role properly as a medical witness, how to establish a better rapport between the medical and legal professions and to analyze and take the necessary preventive steps to keep themselves out of court as defendants.

Without doubt one of the most important areas of legal complications in medical practice involves medical professional liability. Although not a new problem, it has, through a combination of recent circumstances, demanded an inordinate amount of attention from individual physicians and medical organizations. Some of the causes for this increased emphasis are the tendency of the public to seek financial remuneration for real or imaginary damage, more frequent and higher jury awards, and inflation, necessitating higher payments for claims, judgments, and defense. The unfavorable articles in lay magazines dealing with the increased cost of medical care in general have created antagonism against the physician, while the favorable articles on new drugs, methods of treatment, and modern miracle surgery have, in

some instances, been sufficiently exaggerated to lead the public to believe that a less than perfect result must be evidence of negligence.

Rather than attempt to discuss all three of the areas I have mentioned, in general terms, I will deal specifically with what we have learned concerning the incidence and causes of malpractice cases and some of the ways of reducing the vulnerability of the profession in this area.

Facing the facts, it must be admitted that there are cases of actual malpractice in which a patient suffers injury as a result of accidents or carelessness or ignorance on the part of the physician. No matter how ethical and cautious a physician may be in his professional and business relations with others, legal difficulties are sometimes inevitable. It has never been nor will it ever become our purpose to try to avoid responsibility for the physician in these cases. The persons injured as a result of such accidents or inefficiency deserve to be and should be compensated. That is why physicians carry professional liability insurance. It is one of the obvious results and costs involved in the admittedly hazardous job of practicing medicine.

However, as a result of the study of professional liability which we have been conducting for the past two years, we have substantiated what we have felt to be the case—the vast majority of all professional liability claims and suits are not justly founded. In some localities the likelihood of being sued is becoming so great that the practicing physician must recognize that it constitutes a definite occupational hazard. If this situation were evidence that the medical profession is becoming increasingly inefficient, then the solution would of course be obvious. But the blunt truth is that the majority of all professional liability claims and suits filed involve physicians who are above the average of their respective groups in skill, experience and professional standing.

Ironically enough the very skill of modern doctors is one of the principal producing causes of malpractice claims. Doctors have achieved such good results so often that many patients expect a perfect solution to most medical problems. The public still recognizes that *certain* ills are incur-

Presented by C. Joseph Stetler, Director, Law Department, American Medical Association, to the Jefferson County Medical Society, Birmingham, Alabama, November 4, 1957.

able, but in those areas in which cures are normally obtained many patients immediately blame the doctor if the results are not entirely what they expected. Too many patients think that the doctor can guarantee results, a feeling which some doctors encourage and one which other doctors make no particular effort to correct.

It is a known fact as well that the general public is becoming increasingly litigation conscious. The other day I read in the paper about a suit involving, what I consider to be, a completely absurd and ridiculous situation. A woman in New York hired a caterer to supply the food for a fashionable party and ordered roast beef for the meat course at the dinner. Through mistake the caterer served chicken. Result: a suit for several thousand dollars; alleged damages: trauma to the hostess, embarrassment, plus pain and suffering.

If you read the October issue of Medical Economics, you possibly noticed an article entitled "Is Medicine Above the Law?" The author Melvin Belli, a very vocal attorney from California, has dedicated much of his time recently to the purveyal of highly inaccurate and detrimental propaganda concerning the medical profession. Irrational and unrestrained comments concerning medical professional liability, such as Mr. Belli is prone to make, are complicating an already serious situation which is not only dangerous for the medical profession but the public as well. The damage suit club which is waiving so irresponsibly over the heads of doctors may result in a serious deterioration in the quality of medical care.

If the present trend continues and if a physician must become increasingly apprehensive of legal suits, his own aggressive instinct will inevitably, in some measure, overcome his humanitarian and professional motivations. Such a doctor will be inclined to give too much time to protecting himself and less to the care of his patient. He may hesitate to assume responsibility in a case where the prognosis is poor. He will have a tendency to omit highly successful, but slightly dangerous, medical procedures. Whether medically indicated or not, he will exhaust every possible, established laboratory aid in every case; he will, on the slightest indication, bring consultants into the case; he will prefer to keep the patient a longer time in the hospital than is necessary. By these means, although the cost to the patient is increased, the hazard to the attending physician will be reduced.

The great number of these claims and suits will inevitably have another undesirable effect. They will cause a lowering of professional prestige and engender mutual mistrust between the patient and his physician. This is distinctly detrimental to the patient. When a patient feels a positive as-

urance that he is in safe hands, the solace he gets favorably affects his rate and chances of recovery. Emotional relief, as you know, plays a substantial part in the healing of organic disease.

Until a few weeks ago we were handicapped in our consideration of malpractice problems and in the formulation of a prevention program by a lack of reliable data as to the incidence and causes of claims and suits. I am happy to say that we now have a better basis on which to proceed as a result of a survey of a random sample of 5% of the A. M. A. membership (with an 80% response); an analysis of all reported medical professional liability suits from 1935 through 1955, and an opinion survey of medical society executives. I would like to share with you the data we have collected. Some of you will wonder why we didn't obtain our statistics from the primary source—the files of the insuring companies rather than from individual physicians. The answer is simple and yet surprising. Most of the insuring companies do not segregate their statistical data on their malpractice experience but lump it in with their other casualty insurance coverage. Other companies are reluctant to give us the information even though we are not interested in the identity of the physicians involved. Only two companies have supplied information covering the past three years. We have a meeting scheduled in New York with all of the National Bureau companies on November 13th. We are hopeful of better cooperation after that date.

Admitting in advance, therefore, certain limitations in connection with our figures, let me proceed with what I believe are the only and therefore the best national statistics in this field.

CLAIMS INCIDENCE

Fourteen per cent of all A. M. A. physician members in the U. S. have had a medical professional liability claim or suit brought against them. This national average of 1 out of every 7 physicians is greater than the average in Alabama. From our figures it appears that 1 out of every 11 members of the A. M. A. practicing in Alabama has had a professional liability claim or suit. The highest percentage is in California with 1 out of 4 and the lowest is in South Carolina with 1 out of every 33.

Approximately 18,500 living physicians in the United States have had a claim or suit brought against them at some time—approximately 75 of these doctors are in Alabama.

These figures, at first blush, sound frightening; however, let's analyze them. They represent all of the claims brought against living physicians whose length of practice ranges from 1 year to as long as 40 or 50 years. Furthermore, 40% of these claims and suits have been dropped or decided in

favor of the physician.

MULTIPLE CLAIMS

The next question which logically presents itself is, how many physicians are malpractice prone? From our survey we have learned that of the physicians who have had claims, 87% have had but 1; 10% had 2; 2% 3; and 1% 4. Thus 13% have had more than 1 claim.

INCREASE IN CLAIMS

In our survey we asked physicians if, in their opinion, medical professional liability claims had increased over the past five years. Twenty-nine per cent felt that they had, but 40% said there had been no change. Here in Alabama only 6% of the physicians felt that claims in their community had increased over the past five years. Physicians in some of the states had a decidedly different opinion in answer to this question. Seventy-five per cent of the physicians in the District of Columbia felt that claims had increased in their community. In checking our statistics I found that your state had the smallest number of physicians who felt that professional liability claims had increased.

TYPE OF PRACTICE

What type of practice does the physician engage in who is involved in these claims or suits? Our study disclosed that the full-time specialist is most frequently the defendant. This is not surprising if you remember that the average claimant probably assumes that the medical specialist has a higher income and carries more professional liability insurance than the non-specialist. The claimant may only see the full-time specialist a few times and for this reason may not have the same personal feeling towards him as he does toward his family physician. Then, too, the full-time specialist is probably faced with more complicated and complex medical problems than the average non-specialist.

BOARD CERTIFIED

Twenty-nine per cent of the physicians who have experienced a claim or suit were board certified at the time the alleged negligent act was performed. You may be interested to know that only 22% of the physician population in 1956 was board certified. Probably the reason that a slightly higher percentage of physicians having claims or suits are board certified is again due to the complexity of the medical problems which they handle.

YEARS IN PRACTICE

As I stated earlier, some 14% or 1 out of every 7 members of the American Medical Association have had a claim or suit brought against them. Is it the recent medical school graduate who is faced with these claims or suits? The answer to

this question is No. We have found that there are as many physicians who have been practicing more than 13.4 years involved in these claims and suits as there are physicians who have been practicing less than this period of time. In other words, the median or average is 13.4 years. In the East South Central States, which include Alabama, the median years in practice is 11.5 or about two years younger than the national average.

DIFFICULTY IN OBTAINING INSURANCE

In my opinion the information which we have collected in our survey explodes some of the myths that have existed for many years with respect to medical professional liability. We have heard for some time how difficult it is to obtain medical professional liability insurance. However, more than 9 or 10 physicians indicated that they have had no difficulty in obtaining insurance. Only 1% indicated any serious difficulty in this respect.

DIFFICULTY OBTAINING INSURANCE AFTER CLAIM

As a matter of fact even physicians who have had a claim or suit do not have difficulty in obtaining insurance. Medical society executive secretaries, in response to a questionnaire which we sent to them, told us that at least 45 insurance companies write this type of insurance in this country. Not all of them write in every state. Twenty-six of these companies are active in only 1 or 2 states and, in addition, we have found that 13 state medical societies either have a group insurance program or have endorsed a particular type of policy. The next question in which we were interested was whether or not physicians actually carried professional liability insurance.

PHYSICIANS COVERED BY INSURANCE

The answer to this question appears to be overwhelmingly Yes. Some 93% of the physicians in this country who have had claims were carrying medical professional liability insurance. In the East South Central States, including Alabama, 88% of the physicians who have had claims had professional liability insurance.

COST OF INSURANCE

What about the cost of this insurance? Is it excessive? Prior to our study I would have said that most physicians believe that it is excessive. As a matter of fact our study was prompted in part by the fact that physicians complained about the excessive cost of this insurance. However, some 56% of the physicians have indicated that in their opinion the cost of the insurance which they carry is reasonable.

PRIMARY REASONS FOR CLAIMS

One of the most important aspects of this problem is, of course, the causes of malpractice claims and suits. In analyzing the reasons given by physicians, we have divided them into primary and

secondary classifications. Our study showed that, in 24% of the cases reviewed, the reason for the claim was a poor operative result; in 20% of the cases, poor medical results; in 10%, errors in diagnosis; and in 9% foreign bodies were left in the patient. The other remaining categories specified occurred in 8% or less of the cases. As I stated, in the majority of these cases there was also a secondary factor which was extremely important in causing the claim or suit to be filed.

SECONDARY CAUSES

I would like to point out that 27% of the secondary causes listed are under the direct control of the medical profession. This 27% includes careless comment about another physician and situations in which the patient had another disease or disability which was not properly diagnosed or which progressed badly. Some 22% of the secondary causes consist of pressures or influences exerted on the claimant by outsiders such as an attorney or a relative. The patient himself is a producing factor in 25% of the secondary causes. Such factors include bringing a claim for financial profit, the avoidance of paying a medical bill, or because of a mental disability or the fact that the patient was an alcoholic or narcotic addict.

FIELDS OF MEDICINE INVOLVED

Thirty one per cent of the alleged negligent acts occurred in the field of surgery; 20% in the field of medicine; 20% in the practice of orthopedics; 12% in obstetrics and gynecology, and 17% in other fields. In the East South Central States, including Alabama, the percentage of claims involving medicine and orthopedics is slightly higher than the national average and the percentage involving surgery and obstetrics and gynecology is lower.

PLACES NEGLIGENT ACTS OCCUR

In 67% of the cases the negligent act occurred in the hospital, 24% in the doctor's office, 6% in the patient's home, and 3% at work or elsewhere. In your state we find that practically these same percentages hold true. Sixty-five per cent of the acts occurred in the hospital, 29% in the doctor's office, and 6% in the patient's home.

As a result of the high incident rates in hospitals, the American Medical Association and the American Hospital Association have appointed a joint committee to analyze the problem more thoroughly and to formulate an effective in-hospital prevention program.

CLAIMANT'S AGE

In our study we were also interested in interpreting some data concerning the average claimant. We find in our study, for instance, that the median age of the claimant is 34.4 years. In your area, however, the median age is 23.8 years—

nearly 10½ years younger than the national average.

SEX OF CLAIMANT

The average claimant throughout the United States is more apt to be a female than a male. Practically this same percentage was found in your area, where the percentage of female claimants was 53.

DISPOSITION OF CLAIMS AND SUITS

Now then, what about the outcome of these claims and suits? We have found that 7% of the claims are still pending; 17% have been dropped, 33% have been settled or compromised, and 43% became suits. In tracing the status of the claims that became suits, we found that 18% are still pending, 12% were dropped, 20% compromised, 9% decided in favor of the claimant, and 41% decided against the claimant.

MONEY PAYMENTS

One of the last and most important questions which concerned us was whether or not the claimants actually obtained a money award. We have found that in 45% of the claims and suits, the claimants obtained money from the physician and in 40% they do not. We have found that in the claims stage or prior to suit, nearly twice as many claimants received some money as those who do not. In the suit stage the reverse is true, that is twice as many claimants do not collect as those who do.

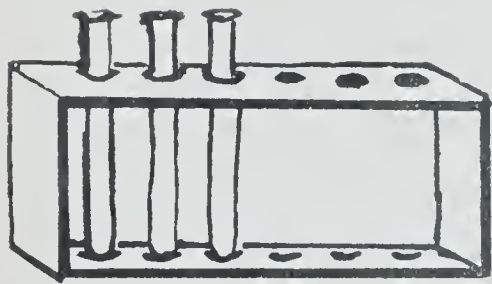
From all of these facts and statistics we are therefore able to picture the composite claimant as a 34.4 year old housewife who was most probably dissatisfied with an allegedly operative result. The national composite defendant physician appears to be a full-time specialist in active private practice. He has probably been in practice 13.4 years and had personal liability insurance at the time of the alleged negligent act. The incident complained of most probably occurred in a hospital. It involved surgery and was quite possibly precipitated into a claim because of the comment of some other physician. The chances are that the physician did not seek a settlement of the claim although the patient might have. The claim probably went on to suit but, if so, the patient probably did not receive an award or settlement. After the claim or suit was disposed of, the physician probably did not experience difficulty in obtaining or renewing his personal liability insurance coverage.

Analyzed in retrospect, nearly all professional liability claims are theoretically preventable. For many years we have been stymied in our efforts to combat this serious problem. However, armed with the information which we now have, the medical profession should be able to move forward with greater confidence and with better success

in its battle with this problem. Active and effective prevention programs must be initiated and implemented at the local, state and national levels. These programs should be aimed at methods of conducting a medical practice which will, first, minimize professional errors and, second, reduce the likelihood of having claims filed in the event

of an untoward or poor result.

We are pleased with the efforts which your society has made in this area in the past and are hopeful that you will use the data and let us cooperate with you in doing an even more effective job in the future.



STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.

State Health Officer

PUBLIC HEALTH'S MEASURING STICK

Progress in some fields can not always be measured with any fair degree of accuracy. Diplomatic relations of countries one with the other are examples of actions which perhaps lend themselves very little to scientific measurement. A foreign policy adopted by one nation for the purpose of dealing with another may indeed achieve the desired goal in the long run. But it would undoubtedly be difficult, if not impossible, to measure accurately at any given time the exact result of such a policy. Thus, diplomacy, of necessity, cannot proceed on a strictly mathematical basis.

Fortunately, another field of endeavor that holds importance for every individual can be measured by the painstaking application of mathematics. That field is public health and the progress that is made can be determined in figures for morbidity and mortality. In other words, public health has a measuring stick and that device is vital statistics.

Some time ago an editorial in the *Journal of the American Medical Association* pointed out that the work of preventive medicine, as seen through vital statistics, is not as easily glamorized as is "... the picture of a surgeon in the operating room. . . ." But mature minds, the editorial continues, are needed to appreciate "... the importance, the tensions, and the occasionally exciting discoveries in vital statistics."

How important are vital statistics to Alabama, for example? A 1940 volume prepared by the State Health Department's Bureau of Vital Statistics is prefaced by a statement of their significance:

"No public health program is sound unless based upon a careful study of vital statistics and its success or failure can only be measured in the same way. Every health officer should possess a work-

ing knowledge of at least the geographic area under his supervision. He should substitute facts for personal opinions and hearsay; study the vital statistics without permitting preconceived notions and prejudices to interfere with a correct interpretation of the facts. Having determined the facts, he should shape his public health program in accordance therewith and measure its success by a fair, open-minded analysis of the statistics. Not only the health officer but every member of his staff should interest himself in vital statistics. Interest should not be confined to professional health workers alone. Every resident of Alabama should know what the vital statistics of his state are."

Vital statistics, then, are the record of what is happening to the population. Local, state and national health agencies can use this record to determine the success of preventive programs of the past. The figures, as well, serve to chart the agency's course for the future. The individual, of course, has a stake in public health programs. A newly launched project, based on the health picture drawn by vital statistics, may well mean a lengthened life span for him. But the collection of vital records serves him often directly, as well. The death certificate, for example, is many times invaluable in connection with the receipt of insurance or other benefits. The birth certificate, on the other hand, may be needed to establish proof of age, of citizenship or to establish record of parentage, race or right to inheritance.

That *Journal of the American Medical Association* editorial we mentioned earlier tells us that "... the gradual extension of the registration area of this country until every state was included makes inspiring history." The United States Census Bureau organized the registration area for births and deaths in 1915 and 1880, respectively, but it was 1934 before every state was included. To qualify for inclusion in the registration area, a state had to prove that it was collecting records on at least 90 per cent of the deaths occurring within its boundaries. The same was true of birth

records. Alabama became a part of the death registration area for the year 1925, and of the birth area five years later.

Vital statistics had their beginnings in a much earlier age than the 1880's, however. The ancient Egyptians, Greeks and Romans doubtlessly realized their value, for they made enumeration of their populations. Birth and death registrations were required by the Romans, while in 1538 England began keeping up with baptisms, marriages and deaths. As early as 1632 in America, Virginia attended to the registration of burials, christenings and marriages. The Grand Assembly of that state passed a law requiring that a minister or warden from every parish report on these events once each year.

Provisions for effective registration were not to be made until almost two centuries later. In 1842 Massachusetts passed a law requiring certain information concerning the number of births and marriages, and the number of deaths, as well as the cause of deaths. This, then, was the first state-wide legislation providing for the collection of vital records in the United States.

Alabama, of course, was collecting vital statistics long before it was admitted to the birth and death registration areas. In fact, births and deaths were filed with a central registry as early as 1908. When the Alabama State Department of Health had a small handful of people for a staff, the Registrar of Vital and Mortuary Statistics was among them. And the department's annual report for 1915 reveals that for the vital statistics work "of stupendous importance" there were two employees—the registrar and one assistant, out of a total department staff of nine people.

How does a vital event get to be recorded, and thus become a part of state and national records? In the case of a birth, there is a usual sequence of events from the time the birth certificate is made out by the attending physician to the time when it is permanently filed by the State Health Department's Bureau of Vital Statistics. First, the doctor mails the certificate to the local registrar, usually within 10 days of the actual date of birth. A copy of the certificate is retained by the local registrar, while the original is forwarded to the health department in the county where the birth occurred. The health unit checks the certificate for completeness, and queries the attending doctor about any missing information.

Then the certificate is sent to the State Health Department in Montgomery. There, the original is bound together with others in volumes, indexed, and stored in a fireproof vault. They are thus available for present and future statistical studies.

At the time the birth is recorded, or shortly thereafter, parents are notified by means of a writ-

ten statement that their child's birth is on record. Later, a certified copy of the birth certificate may be needed for various purposes. "Certified copy" is the term applied to an exact copy of the original birth or death certificate. The certified copy must be properly signed and must bear the seal of the state.

A similar chain of events is involved in the recording of a death. Supplying such information as age, sex, race, place of birth, occupation, place of death and place of burial is the undertaker. Next, the attending or other doctor receives the certificate, to fill in such information as length of illness, the date he last saw the patient alive, the date and hour of death, as well as the cause. From the doctor's hands, the certificate goes to the local registrar, then to the local health department, and finally, on to the State Health Department. There in the Bureau of Vital Statistics, as is the case with births, the death certificate is filed and indexed for future reference.

Death registration, it might be said, involves one item which perhaps makes it a more complex procedure than the registration of births. Attention is given by health departments and doctors to assigning the cause of death. In earlier years, the author of *An Introduction to Public Health* (Harry S. Mustard, M. D., Macmillan, 1935) tells us it was not unusual for a single cause of death to be described in many different ways. Here are some of the examples he gives: "What is now called intestinal obstruction once had the homely but descriptive title 'twisting of the guts'; and suicide was literally translated and recorded as 'self murder.'" In fact, causes could still be described in a variety of ways were it not for the International List of Causes of Death. This list includes standard names or titles for death causes, and it is used by all health departments in the United States, and in many if not all foreign countries. This worldwide uniformity in death registration permits comparisons of mortality statistics that were not possible before its adoption.

The State Health Department's Bureau of Vital Statistics also records marriages and divorces which take place in Alabama. While the term vital statistics, strictly speaking, refers to biologic events, there is a reason for including weddings and divorces. Dr. Mustard in *An Introduction to Public Health* explains their inclusion in this way: "While the latter two procedures are essentially human conventions, biologically the one represents preparation for mating and reproduction, and the other indicates or implies elimination of probable reproduction by the pair concerned."

Needless to say, an extraordinary amount of work is involved in collecting and filing, not to mention studying, the records of births, deaths, marriage and divorces. In what might perhaps

be called a typical recent year, 1956, the State Health Department's Bureau of Vital Statistics filed original vital records for these events: 83,244 live births, 26,896 deaths, 1827 stillbirths and 20,764 marriages. In addition, 10,761 transcripts of divorce decrees, as well as 41,528 reports of premarital physical examinations and blood tests were recorded.

Even this many records do not complete the picture of vital statistics work. In the same year, the bureau issued 102,329 certified copies of vital records. Moreover, record contents for the many needs involving proof of age, citizenship, family relationship and the like, were furnished in 45,654 other instances, or cases. Also, new certificates were prepared for 1216 adoptions and 841 legitimations, while 15,400 delayed certificates of birth were filed.

Fortunately, all vital statistics work today does not have to be done by hand. The mechanical aids which are now available mean that vital statistics counts and separations into categories can be accomplished with relative speed. In Alabama, this invaluable work is performed by the State Health Department's Division of Machine Tabulation.

That editorial in the *Journal of the American Medical Association* we mentioned earlier referred to the "occasionally exciting discoveries" in vital statistics. Of course, all the death figures for recent years might be said to be exciting when compared with those a century ago, in the sense that today's statistical summaries reflect medical science's virtual conquest of several diseases. But in Alabama one recent discovery in vital statistics stands out above many if not all others. Provisional figures for 1955 showed that for the first time in the state's history, tuberculosis was not among the 10 leading single causes of death. However, this discovery, exciting as it was, did not mean that the battle against this disease was over. On the contrary, the 1955 death toll of 344 from tuberculosis was considered high, and many newly found cases continue to be reported each month.

The birth and death figures you read in your newspaper or hear on the radio, then, are important. In Alabama and elsewhere, vital statistics are the measuring stick to insure that public health programs designed to provide the highest degree of well-being are begun and continued as long as they are needed.

A. M. A. Schedules Rural Health Conference March 6-8—Changing patterns in nutrition, health costs, medical care, dental health and safety will serve as the focal point for discussion at the 13th national Conference on Rural Health to be held March 6-8 at the Hotel Heidelberg, Jackson, Miss. The conference is sponsored by the AMA's Council on Rural Health in cooperation with southern state medical associations and farm, educational and allied organizations.

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director

SPECIMENS EXAMINED

October 1957

Examinations for diphtheria bacilli and Vincent's	324
Agglutination tests	473
Typhoid cultures (blood, feces and urine)	417
Brucella cultures	3
Examinations for malaria	27
Examinations for intestinal parasites	2,431
Darkfield examinations	3
Serologic tests for syphilis (blood and spinal fluid)	22,641
Examinations for gonococci	1,590
Examinations for tubercle bacilli	3,778
Examinations for Negri bodies (smears and animal inoculations)	192
Water examinations	2,193
Milk and dairy products examinations	4,330
Miscellaneous examinations	579
Total	38,981



BUREAU OF PREVENTABLE DISEASES

W. H. Y. SMITH, M. D., Director

CURRENT MORBIDITY STATISTICS

1957

	Sept.	Oct.	E.E.* Oct.
Typhoid and paratyphoid	6	0	5
Undulant fever	2	3	2
Meningitis	19	6	6
Scarlet fever	467	408	64
Whooping cough	18	47	33
Diphtheria	12	12	59
Tetanus	2	4	4
Tuberculosis	155	159	233
Tularemia	0	2	1
Amebic dysentery	0	1	2
Malaria	0	0	4
Influenza	4,036	50,999	65
Smallpox	0	0	0
Measles	65	35	37
Poliomyelitis	9	4	32
Encephalitis	3	3	1
Chickenpox	5	6	13
Typhus fever	4	2	3
Mumps	17	25	30
Cancer	724	647	377
Pellagra	0	0	1
Pneumonia	127	146	108
Syphilis	79	81	243
Chancroid	1	3	10
Gonorrhea	312	211	395
Rabies—Human cases	0	0	0
Positive animal heads	15	10	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

DEPARTMENT OF HEALTH

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATISTICS
FOR SEPTEMBER 1957, AND COM-
PARATIVE DATA

Live Births, Deaths, Fetal Deaths, Infant Deaths, and Deaths by Cause	Number Registered During September 1957			Rates* (Annual Basis)		
	Total	White	Non- White	1957	1956	1955
Live births	7859	4781	3078	30.3	29.3	30.0
Deaths	2256	1373	883	8.7	8.1	7.8
Fetal deaths	160	66	94	20.0	19.1	19.6
Infant deaths—						
under one month	177	79	98	22.5	20.8	22.2
under one year	228	97	131	29.0	28.7	27.3
Cause of Death						
Tuberculosis, 001-019	25	11	14	9.6	7.3	9.2
Syphilis, 020, 029	5	2	3	1.9	2.3	2.4
Dysentery, 045-048	3	2	1	1.2	0.8	
Diphtheria, 055						1.6
Whooping cough, 056						0.8
Meningococcal infections, 057	3	2	1	1.2		
Poliomyelitis, 080, 081	2	1	1	0.8		0.8
Measles, 085					0.4	
Malignant neoplasms, 140-205	320	227	93	123.2	109.7	101.5
Diabetes mellitus, 260	23	15	8	8.9	10.0	5.2
Pellagra, 281	3	3		1.2		0.4
Vascular lesions of central nervous system, 330-334	294	180	114	113.2	97.7	103.4
Rheumatic fever, 400-402	1	1		0.4	0.4	2.0
Diseases of heart, 410-443	720	476	244	277.2	264.1	252.4
Hypertension with heart disease, 440-443	130	53	77	50.1	56.0	49.5
Diseases of the arteries, 450-456	33	21	12	12.7	15.4	16.0
Influenza, 480-483	7	3	4	2.7	0.8	2.4
Pneumonia, all forms, 490-493	54	25	29	20.8	22.0	14.0
Bronchitis, 500-502	3	2	1	1.2	1.2	1.2
Appendicitis, 550-553	5	4	1	1.9	0.8	1.2
Intestinal obstruction and hernia, 560, 561, 570	18	11	7	6.9	4.6	3.6
Gastro-enteritis and colitis, under 2, 571.0, 764	17	5	12	6.5	3.9	5.2
Cirrhosis of liver, 581	10	7	3	3.8	4.6	6.0
Diseases of pregnancy and childbirth, 640-689	6	1	5	7.5	7.8	9.1
Congenital malformations, 750-759	29	18	11	3.7	4.9	3.6
Accidents, total, 800-962	155	97	58	59.7	58.7	44.7
Motor vehicle accidents, 810-835, 960	84	55	29	32.3	32.4	26.0
All other defined causes	422	227	195	162.5	160.6	167.3
Ill-defined and unknown causes, 780-793, 795	98	32	66	37.7	26.3	27.6

PROVISIONAL BIRTH AND DEATH STATISTICS
FOR OCTOBER 1957, AND COM-
PARATIVE DATA

Live Births, Deaths, Fetal Deaths, Infant Deaths, and Deaths by Cause	Number Registered During October 1957			Rates* (Annual Basis)		
	Total	White	Non- White	1957	1956	1955
Live births	7165	4473	2692	26.7	27.5	26.9
Deaths	2545	1530	1015	9.5	7.9	8.1
Fetal deaths	155	68	87	21.2	21.3	21.6
Infant deaths—						
under one month	162	76	86	22.6	18.9	22.6
under one year	236	105	131	32.9	26.8	31.6
Cause of Death						
Tuberculosis, 001-019	22	15	7	8.2	7.5	11.5
Syphilis, 020-029	9	2	7	3.4	3.0	1.1
Dysentery, 045-048	2	1	1	0.7	0.4	
Diphtheria, 055	1		1	0.4	0.7	1.1
Whooping cough, 056					0.4	0.7
Meningococcal infections, 057	5	4	1	1.9	1.1	0.4
Poliomyelitis, 080, 081	1		1	0.4	0.7	1.1
Measles, 085						
Malignant neoplasms, 140-205	324	241	83	120.7	111.7	98.8
Diabetes mellitus, 260	36	19	17	13.4	13.4	7.1
Pellagra, 281	1	1		0.4		1.5
Vascular lesions of central nervous system, 330-334	317	190	127	118.1	103.1	105.4
Rheumatic fever, 400-402	2	1	1	0.7	2.2	
Diseases of the heart, 410-443	822	530	292	306.3	258.6	260.3
Hypertension with heart disease, 440-443	151	72	79	56.3	52.3	55.3
Diseases of the arteries, 450-456	58	34	24	21.6	13.4	19.7
Influenza, 480-483	44	18	26	16.4	3.4	2.6
Pneumonia, all forms, 490-493	88	42	46	32.8	20.9	19.7
Bronchitis, 500-502	7	5	2	2.6	1.5	2.6
Appendicitis, 550-553	3	3		1.1	1.5	1.1
Intestinal obstruction and hernia, 560, 561, 570	16	10	6	6.0	3.4	3.3
Gastro-enteritis and colitis, under 2, 571.0, 764	7	2	5	2.6	4.1	5.6
Cirrhosis of liver, 581	22	14	8	8.2	3.4	4.8
Diseases of pregnancy and childbirth, 640-689	4		4	5.5	5.3	9.4
Congenital malformations, 750-759	36	28	8	5.0	3.7	4.7
Accidents, total, 800-962	165	96	69	61.5	61.6	69.4
Motor vehicle accidents, 810-835, 960	97	64	33	36.1	31.4	36.4
All other defined causes	463	255	208	172.5	138.6	139.9
Ill-defined and unknown causes, 780-793, 795	130	47	83	48.4	28.4	37.9

*Rates: Birth and death—per 1,000 population; Infant deaths—per 1,000 live births; Fetal deaths—per 1,000 deliveries; Maternal deaths—per 10,000 deliveries; Deaths from specified causes—per 100,000 population.

Based on Revised Population Estimates.



BOOK REVIEWS

Clinical Toxicology of Commercial Products—Acute Poisoning (Home and Farm). By Marion N. Gleason, Research Assistant in Pharmacology, School of Medicine and Dentistry, University of Rochester, Rochester, New York; Robert E. Gosselin, M. D., Ph. D., Professor of Pharmacology, Dartmouth Medical School, Hanover, New Hampshire; and Harold C. Hodge, Ph. D., D. Sc., Professor of Pharmacology and Toxicology, School of Medicine and Dentistry, University of Rochester, Rochester, New York. Cloth. Price, \$16.00. Pp. 1160. The Williams and Wilkins Co., Baltimore, 1957.

This reviewer agrees with the statement in the volume's foreword, written by George M. Wheatley, M. D., M. P. H., Third Vice-President, Health and Welfare, Metropolitan Life Insurance Co., and Chairman, Subcommittee on Chemical Poisons, American Public Health Association, that "The authors have accomplished a colossal task which others, including manufacturers themselves, considered virtually impossible. Yet here it is—practical concrete evidence that nothing which is needed to save life remains 'impossible' to the dedicated men and women in medicine and allied fields."

Said Dr. Wheatley also: "This reference volume, designed to make urgently needed information immediately available, should be most helpful to any physician faced with a patient who has swallowed some possibly toxic trademarked product. . . . Widespread and immediate use of such a reference can help to prevent deaths from chemical poisoning."

The reviewer can add nothing to what Dr. Wheatley said.

Douglas L. Cannon, M. D.

Practice of Medicine. Edited by Jonathan C. Meakins, M. D., with 24 Associate Editors. 6th edition. Cloth. Price, \$16.00. Pp. 1916, with 318 illustrations, 4 in color. The C. V. Mosby Company, St. Louis, Mo., 1956.

The review of a comprehensive textbook of medicine is always difficult because, in the investigation of a subject, the book is used as a starting point and not as a fountainhead of all knowledge on that subject.

This volume is edited by Dr. Meakins and twenty-four (24) associate editors, all well chosen. In addition, there are eighty-seven (87) contributors so that actually the book is authored by 112 different people. The general consideration of the various subjects is such that if one did not know, one would never suspect this multiple authorship. The articles are succinct, well written, and quite current in content; and in the opinion of this reviewer this would be a most valuable book for the student and/or general practitioner. The bibliographies at the end of each chapter vary considerably and some contain many very old references which, while interesting from the student's point of view, would not ordinarily be referred to by the general practitioner searching for ready information. Contrarily some of the bibliographies are too short and omit impor-

tant recent references. The prime objection that this reviewer has to this book is its format. The book consists of 1916 pages, is made of heavy glossy paper, and the book weighs nine (9) pounds, making it a most unwieldy tome. However, the print is pleasing and easy to read.

Maurice J. Abrams, M. D.

The Chronically Ill. By Joseph Fox, Ph. D. Cloth. Price, \$3.95. Pp. 229. Philosophical Library, Inc., New York, 16, 1957.

This is a well written book which extensively covers the care of chronically ill patients. The author discusses chronic illness from medical, psychological, social and economic viewpoints, including the care of the patient, adjustment to chronic illness, rehabilitation, family relationships, and institutional programs.

The philosophical approach is predominant. However, the chapters dealing with social and economic aspects offer much information of value in solving our responsibilities to these patients. A few quotations reveal the general line of thought. "The chief aim of treatment of chronic disabilities is to arrest the progress of the disease and to enable the patient to maintain or resume his place in society and in his family." "The most economical care is that which returns a person as quickly and fully as possible to the highest attainable state of health and social effectiveness." "The healthy as well as the sick want reassurance both that the proper type of care will be provided and mankind's battle against disability is moving ahead. The specific problems of chronic disease revolve around diagnosis and care."

The section on medical and institutional planning for prolonged illness draws heavily on the writings of Dr. E. Bluestone of Montefiore Hospital. This section is valuable as it presents expert opinion from a hospital successfully dealing with chronic illness. That this care should be made by an adjustment in the acute hospital's facilities and programs seems the most practical approach to this problem.

This book is valuable for anyone interested in the care of the chronically ill. In view of its broad scope, all of us will find minor technical errors and probably major disagreements with some of its conclusions or implied recommendations.

William B. Crum, M. D.

May's Manual of the Diseases of the Eye. Revised and edited by Charles A. Perera, M. D., Associate Clinical Professor, College of Physicians and Surgeons, Columbia University, New York; Attending Ophthalmologist, Presbyterian Hospital, New York, Consultant in Ophthalmology, Vassar Brothers Hospital, Poughkeepsie, New York. Twenty-second edition. Cloth. Price, \$6.00. Pp. 518, with 378 illustrations, including 32 plates with 93 colored figures. The Williams & Wilkins Company, Baltimore, 1957.

The first edition of this textbook was published in 1900, and ever since that time it has remained a compact, well written, accurate and popular basic textbook of eye diseases. It is especially adapted for the student and the general practitioner and it is not beyond use by those specializing in ophthalmology. This reviewer has found its tables and section dealing with visual efficiency following eye injuries, as reported by the American Medical Association in 1955, most useful in estimating visual loss.

It is an excellent reference manual for all medical personnel, concisely giving answers to everyday eye problems without expounding to completeness on all ophthalmological conditions. Dr. Perera has done a fine job of keeping current this textbook with the ever changing eye disease pattern and its therapy. Many pictures illustrating examining technics, disease states, including beautiful colored plates of the fundus, add so much to this book.

This is an established recommended eye reference textbook.

Karl B. Benkwith, M. D.

The Human Brain from Primitive to Modern. By A. M. Lassek, M. D., Ph. D., Professor of Anatomy, Boston University School of Medicine, Boston, Mass. First edition. Fabricoid. Price, \$4.75. Pp. 242. Chas. C. Thomas, Springfield, Illinois, 1957.

Despite the implication of the title and the promise of the publisher's blurbs, this book is a rather thin, tasteless broth, concocted by inept hands from large quantities of physical and social anthropology, to which has been added a little history, some of the author's special vintage of social philosophy and, for zest and spice, such striking observations as "The story of the evolution of the human mind, when an attempt is made to bring it up-to-date, indicates that mankind faces many problems which have not been resolved."

The first third of the book is a rather superficial review of the evolutionary and ontogenetic development of the human brain, a history of the changing attitudes about its function, and some unorganized comments on its capacities.

The remaining two-thirds is devoted to "The evolution of the human mind." Because the author, here, undertakes to examine something for which he has no definition, he fulfills the reasonable expectation that his treatment of the subject will be ill-defined. Certainly, he reflects the fuzziness of his concepts in such statements as "A neurological site for emotions is situated at the inferior part of the brain also but the locus of the all important mind is still unknown." Does the author imply that it will ever be? His approach is ethnological rather than psychological. Dividing the evolution of the human mind into the presavage, savage, barbarian and civilized (sic!) stages, he wanders aimlessly over eons of law, religion, art, science and 150 pages of print only to conclude "The problem of man has now become man and it may be possible that cooperation, dignity, individual consideration and kindness rather than competition may be the road that should be followed." Amen!

Philip S. Bazar, M. D.

The Caricature of Love. By Hervey Cleckley, M. D., Clinical Professor of Psychiatry and Neurology, Medical College of Georgia, and Chief of Service, Psychiatry and Neurology, University Hospital, Augusta. First edition. Cloth. Price, \$6.50. Pp. 312. The Ronald Press Company, New York, N. Y., 1957.

With titular stereotypy, the author of "The Mask of Sanity" has now written "The Caricature of Love." While he claims, in his preface to the latter book, that it concerns itself with two chief themes, "Sexual disorder and its influences, and a critical examination of some concepts of sexuality which are prominent today in psychiatry and psychology," it is more in the nature of a cry for awakening to the subtle subversion of our social, moral and ethical attitudes toward sex by the misguided protagonism of social avant guardists, literate sexual deviates and Freudian analysts. It is Dr. Cleckley's contention that these malefactors, enjoying an unwarranted influence, threaten to, or have already, infiltrated current mores with the concept that sexual deviation is not abnormal but simply a harmless variant of the normal. He drags before the bar of his anger, and one suspects his contempt, not only such giants as Hemingway, Fitzgerald, Waugh, Tennessee Williams, and O'Neill but others of lesser stature in the fields of literature, sociology, and philosophy who have despoiled the fair name of sexual love, either by a sympathetic characterization of homosexuality or more indirectly by a disguised misogyny or by the degradation of wholesome erotic emotions and impulses.

Tributary to this theme is his rejection of the sexual concepts of Freud and his followers. The author warms to his task. Libido, castration anxiety, Oedipus, Bisexuality, and prenatal emotional traumata are clawed and fanged mercilessly. At times he becomes so incensed with analytic constructs about sex that he breaks the point, chasing off tangentially after the whole of psychoanalysis with chop-licking gusto and in full cry, bringing to bay such concepts as "resistance," dynamic psychiatry, dream analysis, and symbolic interpretations.

Dr. Cleckley is a facile man with an adjective; his ironic rhetorical questions are delivered with the telling delicacy of a foil but yet with the power of a broadax. Psychoanalysis has been attacked again and again in the past for its disregard for the simplest rules of logic, its dogmatic interpretations, its indifference to the requirements of scientific proof, its insulting self satisfaction, but rarely has blunt anger, dull logic, statistics, moral and scientific indignation been as effective as Cleckley's trenchant wit, his satire, his disdain.

Had the author been content to rest his case at the close of chapter 26, this book could have been recommended as a highly erudite and stimulating examination of some trends and some attitudes toward sex, now active in our culture. Having attacked and slain all the dragons who had threatened the life and good name of the fair Eros, Sir Cleckley evidently felt the need to extol for the reader, in a two-chapter paen, the pristine beauty and unsullied virtues of love and to reaffirm his undaunted devotion. In these two chapters, with a romantic sensitivity and delicacy in complete contrast to the muscular robustness of the preceding portion, the author adds an irrelevant and cloying panegyric, in praise of erotic love. It is rather doubtful that any of his readers will have been so alienated from sex by the quoted comments of its detractors that he should have felt the need to rise to its defense.

Philip S. Bazar, M. D.

HEART BEATS IRREGULARLY FOR 38 YEARS

The irregular beating of a person's heart at frequent intervals—or even constantly—doesn't mean he's going to have a heart attack and die.

In fact, one New Yorker's heart beat irregularly for 38 years before he suddenly died at the age of 94, "having been most active until the very last moment," a New York doctor reported recently.

He was suffering from auricular fibrillation, which is a convulsive movement of the upper chambers of the heart. His was the familial type.

He was one of 22 members of the same family, all of whom had auricular fibrillation. The family's history, covering 36 years and 113 members of five generations, was outlined by Dr. William L. Gould, Albany, N. Y., in the December Archives of Internal Medicine, published by the American Medical Association.

The first two cases occurred in a stepbrother and a stepsister. Eight members of the second generation who lived to the sixth decade or beyond all developed auricular fibrillation. In the third generation, 11 cases have already developed and more may appear from time to time, Dr. Gould said.

Only one case has appeared in the fourth generation—in a 32-year-old man, who is the youngest one to have the condition. So far the fifth generation is too young to show signs of the disorder.

The usual symptoms of paroxysmal auricular fibrillation are palpitation, irregular beat, "the heart in the mouth" feeling, weakness, dizziness, faintness, and cold sweat. They present many problems of diagnosis, since they usually disappear before a doctor can arrive and make a diagnosis.

When the fibrillation becomes perpetual, the diagnosis is simplified, even though the physical symptoms usually disappear, since the electrocardiogram will readily show the irregular beat.

A family history of similar occurrences may help in diagnosing paroxysmal cases. Treatment is generally very simple. Posture changes sometimes help during the attacks. When drugs are needed, barbiturates are better than digitalis, quinidine or nitroglycerin, which are usually given in ordinary auricular fibrillation, the author said.

The patient should continue his usual routine, Dr. Gould said. He is not a "cardiac-failure patient"; in fact, familial auricular fibrillation does not even predispose the patient to cardiac failure.

Only one person among the 113 studied died of a coronary attack, and he had had rheumatic fever in childhood.

Even with perpetual fibrillations, most members of the family lived normally "to a ripe old age," Dr. Gould said.

His study is only the third to deal with familial auricular fibrillation. The others dealt respectively with three brothers and two brothers. Dr. Gould is chief of staff at the Jewish Home and Hospital for Aged, Troy, N. Y.

RESTRICTED USE OF THALLIUM IN PEST CONTROL SUGGESTED

The use of thallium as a pesticide should be restricted to persons familiar with its hazards and trained in its handling, an American Medical Association committee has recommended.

Thallium sulfate, a heavy, white water-soluble salt resembling table salt, is used for the control of rats, mice, ground squirrels, prairie dogs, moles, and insects such as ants and roaches.

The metal is extremely poisonous to all forms of life, according to a special report, prepared by the committee on pesticides of the A. M. A. Council on Drugs. The report, in the November 23 A. M. A. Journal, was prompted by the occurrence—within six months—of more than 60 cases of thallium poisoning, including three deaths, in small children in Texas.

Thallium is one of the "more insidious poisons" because of the delayed and undistinguishing character of most of its symptoms and because of the difficulty in treating poisoning and preventing disabling after effects, according to Bernard E. Conley, Ph. D., Chicago, secretary of the committee.

The most common way in which thallium poisoning occurs is through eating pest baits containing the metal. It may also occur in industry and by eating accidentally contaminated foods. The chemical has a "notorious record" as a means for suicide or homicide. In Europe thallium is now claimed to be superseding arsenic as a murder weapon, the report said.

Unfortunately effective baits containing thallium and other poisons for pest control are usually food products, which also attract children and pets.

This factor is often aggravated by careless storage of attractive packages within reach of children.

The alarming rate of thallium poisoning in Texas and other places threatens to place the

pesticidal use of thallium in the same disrepute as is its use as a drug and cosmetic, Dr. Conley said. It has been used as a depilatory and as a treatment for such diseases as syphilis and ringworm of the scalp.

The availability of effective and less toxic insecticides and rodenticides suggests that sanitation and the public welfare would not be harmed by discouraging the use of thallium as a household chemical, Dr. Conley said.

Symptoms of acute thallotoxicosis are variable, usually appearing in the gastrointestinal tract and nervous system. Loss of hair is the most familiar sign, the report said. Digestive disturbances include a metallic taste, salivation, nausea, vomiting, and abdominal pain. There may be puffiness of cheeks, eyelids, and lips, tingling and pain in the hands and feet, muscular weakness, delirium, convulsions, and coma.

Death may occur in a few days or be delayed several weeks. Recovery requires six or more months and there are frequent sensory and nervous system after effects.

The report said the recommendation that thallium be used only by experienced persons is "neither new nor novel." Over 30 years ago a similar recommendation was made in the A. M. A. Journal in a review of the hazards of thallium used in agriculture.

OIL OF WINTERGREEN POISONING TREATED BY BLOOD EXCHANGE

A 20-month-old boy who swallowed oil of wintergreen was successfully treated by exchanging his blood twice within a short period, according to three Chicago doctors.

Oil of wintergreen is a highly poisonous substance. In fact, a teaspoonful supplies enough salicylate to endanger the life of any infant or small child, the physicians said in the November 23 Journal of the American Medical Association. Oil of wintergreen may be used in small quantities as a flavoring agent, or as a liniment.

Their experience with this youngster emphasizes the value of exchange transfusions as a way of treating this type of poisoning, the doctors said. It has rarely been done before.

The boy was first seen at Children's Memorial Hospital, Chicago, at 8 a. m., Nov. 13, 1956, 22 hours after he had swallowed an unknown amount of oil of wintergreen. He was unconscious, feverish, and had a mild twitching of both arms and legs.

He was first given fluids intravenously, an injection of phenobarbital, and whole blood. When he did not respond, it was decided to do an exchange blood transfusion—in which all the boy's blood was replaced.

After exchanging all of his blood once, he still did not respond. He was given nearly enough blood to replace his total amount a second time. Then he began to cry out at any movement of his arms, legs, or head. His blood pressure and pulse rates rose.

He was given fluids intravenously for 31 hours. By then he was able to sit up and feed himself. By the third day he had completely recovered from the poisoning. Examination a week later showed no after effects.

The authors noted that oil of wintergreen contains 90 per cent salicylate, the same substance found in lesser amounts in aspirin. Between January 1950 and December 1956, they saw three patients, including this boy, with methyl salicylate poisoning. The other two died.

The gastrointestinal absorption of the drug is rather rapid and causes excitation of the central nervous system, fever, nausea, vomiting, dimness of vision, occasional diarrhea, generalized convulsions, and coma. Death results from respiratory failure after a period of unconsciousness.

The authors are Drs. Julius T. Adams and John A. Bigler, Chicago, and Orville C. Green, Evanston, Ill.

A. M. A. INDUSTRIAL HEALTH MEETING TO BE JANUARY 27-29

The 18th annual Congress on Industrial Health, sponsored by the American Medical Association's Council on Industrial Health, will be held Jan. 27-29 at the Schroeder Hotel, Milwaukee.

The congress, to be attended by 500 representatives of labor, industry, governmental agencies, and the medical profession, will cover public and professional relations in occupational health, evaluation of disability, occupational skin diseases, and low back pain as it is related to employment.

The council annually holds the congress as a way of furthering the development and maintenance of high standards in industry. The council, established in 1938, seeks to promote better understanding of the role of constructive medicine in industry and its relation to the economics of medical care, according to Dr. B. Dixon Holland, Chicago, council secretary.

The council supports safe and healthful working conditions for employees through medical supervision of workers, control of environment, health education, and counseling.

Cooperating in the January meeting will be the Wisconsin chapter of the American Academy of General Practice, the State Medical Society of Wisconsin, the Medical Society of Milwaukee County and the Central States Society of Industrial Medicine and Surgery.

The opening session Monday afternoon, Jan. 27, will be devoted to public and professional relations in occupational health. Among the panelists will be Dr. R. Lomax Wells, Washington, D. C.; Dr. Elston Belknap, Milwaukee; Dr. Melvin Newquist, New York, and an industrial hygienist, a nurse, and an industrial medical director.

The Tuesday morning discussion on disability will be conducted by Dr. O. A. Sander, Milwaukee; R. G. Knutson, Madison, Wis., chairman of the Industrial Commission of Wisconsin, and physicians representing government.

Various problems in occupational dermatitis will be discussed Tuesday afternoon by Drs. Harry Foerster, Milwaukee; Leonard Weber, Chicago; Donald Birmingham, Cincinnati, and James W. Jordan, Buffalo.

Dr. Gunnar Gundersen, LaCrosse, Wis., president elect of the A. M. A. will speak at the annual banquet Tuesday evening.

The Wednesday morning session on low back pain will include discussions on cause, economic importance, treatment, prevention by medical examination and selective job placement, and rehabilitation and evaluation of disability. Among the participants will be Dr. Henry Kessler, Newark, N. J. and Dr. R. K. Ghormley, Rochester, Minn.

6,700 FOREIGN PHYSICIANS STUDY IN UNITED STATES

More than 6,700 foreign physicians took advanced medical training in American hospitals in 1956-57.

Writing in the November 16 Journal of the American Medical Association, two New Yorkers summarized a survey conducted by the Institute of International Education and the A. M. A.

The study covered only interns and residents who had both a foreign citizenship and permanent residence in a foreign country. It did not include displaced persons resettled in the U. S. or foreign citizens who have immigrated to the U. S. for permanent residence.

There were 6,741 foreign physicians serving internships or residencies in 797 American hospitals. Of these physicians, who came from 88 countries, 4,753 were residents and 1,988 were interns. Only 908 of the total were women and more than 60 per cent of these women were from the Far East.

The physicians were in 44 states, the District of Columbia, Hawaii, and Puerto Rico. Four states, Idaho, Nevada, New Hampshire, and Wyoming, did not report any. About one fourth (1,673) of all the foreign doctors were in New York state. More than 100 each were in Ohio, Illinois, Massachusetts, Pennsylvania, New Jersey, Missouri,

Maryland, Michigan, Texas, the District of Columbia, Connecticut, and Minnesota.

Over one third (2,293) came from the Far Eastern countries with Latin America and Europe each the origin of one fifth, and the Near and Middle East of one eighth.

The foreign residents were studying in 31 different specialties, with general surgery and general medicine leading the list.

The authors noted that the 1956-57 study is similar to studies in the preceding three years, although the number of physicians has increased each successive year. This may be accounted for in part by the fact that more hospitals have replied to the survey each year.

They also mentioned a survey of Americans studying abroad. Of 9,887 U. S. citizens studying abroad in 1955-56, approximately 21 per cent (2,056) were reported to be studying medicine. Of these, 669 were in Switzerland, 319 in Italy, 293 in Canada, 174 in the Netherlands, and 108 in Belgium.

The authors are Dr. James E. McCormack, assistant vice president of Presbyterian Hospital, New York, and Arthur Feraru, D. en D. de l'U. (Lyons), who is associated with the Institute of International Education.

NEWBORN INFANTS MAY BE MOVED SAFELY BY AIR

Infants who need life-saving surgery can be safely transported—even by air—to another hospital within hours after birth, a Philadelphia surgeon said recently.

However, certain precautions must be taken, Dr. Harry C. Bishop of Children's Hospital, Philadelphia, said in the November 9 Journal of the American Medical Association.

Infants born with congenital heart, intestinal, respiratory, or other defects can be saved if the necessary corrective surgery is performed soon enough.

Specialists in surgical treatment of these disorders are frequently concentrated in large children's hospitals, where their team efforts offer the newborn child needing corrective surgery a better chance of survival, Dr. Bishop said. Therefore, babies frequently must be moved from the hospitals where they are born to these centers.

Such a move must be supervised, he said, by a person who understands that the baby's chances of survival diminish with each passing hour prior to corrective surgery. Arrangements must be made immediately. They include giving the baby antibiotics to prevent infection and a minimum of examination to prevent tiring him too much.

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TUBERCULOUS PERICARDITIS

REX B. PERKINS, M. D.

and

RICHARD A. DILLARD, M. D.

Birmingham, Alabama

Chronic tuberculous pericarditis is a disorder which is amenable to surgical treatment. It is the purpose of this paper to discuss this disease in the light of certain recent contributions that have been made in regard to its etiology, its pathologic physiology, the course of the disease, and newer concepts in its surgical treatment.

It is generally accepted that tuberculosis of the pericardium arises as a direct extension from caseous ulcerating mediastinal lymph nodes.¹ The mediastinal lymph nodes may have become involved secondary to tuberculosis of the lung or of the pleural space. The lesions of the lung would, of course, involve the mediastinal lymph nodes by lymphatic drainage, and we have recently demonstrated in animal experiments that drainage of the pleural space is also to the mediastinal lymph nodes.² It is also possible, however, that in certain instances the tuberculous pericarditis occurs first, the organisms arriving in the pericardium via the blood. There is clinical support for this concept in the finding of cases of apparently primary tuberculous pericarditis,³ also in the occurrence of tuberculous pericarditis during miliary tuberculosis, and in the rare cases of involvement of the pericardium and mediastinal lymph nodes without any tubercles in the lung or elsewhere in the body. In these instances the mediastinal lymph nodes also will be involved, apparently as

a result of lymphatic drainage of the pericardial space. We have recently performed animal experiments demonstrating that the lymphatic drainage of the pericardial space is indeed to the mediastinal lymph nodes.⁴

Following introduction of the organisms into the pericardium by whatever route, there is initiated a protracted, insidiously progressive disease process which, in most instances, results in total disability or death of the individual.^{5,6} During the course of the disease, one may recognize three clinical stages: acute, effusive, and chronic constrictive. The acute phase is characterized by fever, tachycardia, leucocytosis, elevated sedimentation rate, pericardial pain, friction rub and characteristic changes on the electrocardiogram. After several months, there occurs the copious production of pericardial fluid. During this effusive stage, the patient is toxic as a result of his tuberculous infection, manifested by anorexia, fever and weight loss. He may be suffering from tuberculosis in other parts of the body, particularly in the lungs, and also frequently a polyserositis involving other serous cavities. The pericardium becomes greatly thickened, and, very significantly, there is considerable myocardial inflammatory reaction, which began during the initial stage of the disease. There is also chronic pericardial tamponade with impairment of cardiac function in a manner discussed below. As the production of pericardial fluid diminishes, the patient promptly passes into the third stage of his disease, the

From the Department of Surgery, Medical College of Alabama, and Veterans Administration Hospital, Birmingham.

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2. Perkins, Rex B.; Little, Marshall S., and Hawley, William L.: Lymphatic Drainage of the Pleural Space in Dogs, as Determined by Studies with Radioactive Gold (Au^{198}), *Am. Rev. Tuberc.* 75: 145-147, 1957.

3. Riesman, D.: Primary Tuberculosis of the Pericardium, *Am. J. M. Sc.* 122: 6-21, 1901.

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chronic constrictive pericarditis syndrome. The pericardium becomes up to 1 cm. in thickness, contracted, firm and unyielding in character, with caseation and often with calcification. During this terminal period, which may last many years, the patient suffers, in addition to his tuberculous processes, the effects of marked cardiac dysfunction manifested by pulmonary congestion, increased venous pressure, hepatomegaly, ascites and edema. The relentless and progressive course of the disease is characterized by increasing disability, weakness, cachexia, and death.

In illustrating the gravity and relentlessness of the disease, Harvey and Whitehill⁵ report that of 20 proven cases with effusion 16 died. Of 17 proven cases without effusion, 15 died. Blalock and Levy⁶ in 1937 reported that out of 16 proved cases 15 died. That most patients who develop tuberculous pericarditis progress all the way to the stage of chronic constrictive pericarditis is illustrated by the study of Andrews⁷ who found that, in 18 patients with a proved diagnosis, 16 developed chronic constrictive pericarditis. In 18 patients, Stoyanovitch⁸ found that constriction occurred one to twenty-two months after the acute episode. The onset of the use of antituberculous chemotherapy may alter the prognosis somewhat, but it is not yet clearly established how often the use of chemotherapy will prevent tuberculous pericarditis from progressing to the stage of constriction. Goyette et al.⁹ recently reported 27 cases of acute pericarditis clinically diagnosed as tuberculosis, and in which the etiology was proved in only 13 cases. In 5 cases, all drug treated, chronic constrictive pericarditis developed. In 14 patients, Santy¹⁰ found only 8 alive and well five to thirty-six months after the termination of chemotherapy. It is apparent therefore that prompt recognition and vigorous chemotherapeutic treatment in the early stages of this disease may prevent some patients from progressing to severe constriction, and also, possibly more importantly, may prevent the inflammation, atrophy and fibrosis of the myocardium which begins in the acute stage and which is such a strong factor in the final outcome of these cases. Nevertheless, a number of cases will progress to the effusive

stage with thickened pericardium and to the later constrictive stage. Just as antituberculous chemotherapy has not relieved us of the necessity for surgical removal of structurally damaged pulmonary tissue, so it probably will not eliminate the necessity for removing structurally diseased, thickened, contracting pericardium.

In recent years a considerable amount of physiologic study has been performed which places in a more proper perspective the hemodynamic alterations which occur in chronic constrictive pericarditis, and also in the chronic tamponade which occurs in the effusive stage of this disease.

This study has been performed in the experimental animal, and also in human patients. Carter¹¹ performed animal experiments in which he selectively constricted any chamber of the heart or any combination of chambers or the entire heart. He found that only if he constricted the ventricles did he achieve the constrictive syndrome in the dog, and that constriction of the vena cava, atria, or atrioventricular junction caused no disability. In decorticating these same dogs, he found that only if he decorticated the ventricles could he relieve the animal of its constrictive syndrome, and that decortication of the vena cavae, atria, or atrioventricular junction did not benefit the animals at all. The clinical investigation of patients suffering from chronic constrictive pericarditis has been carried out by several groups using the cardiac catheterization technique, and in particular the results of Sawyer¹² have been interesting. It can be shown that the vena caval, rt. atrial, rt. ventricular end diastolic, pulmonary artery mean, and pulmonary capillary pressures are all markedly increased at about the same level. These findings rule out, for example, an atriocaval junction constriction, because, if the latter lesion were present, there would be a pressure gradient at this point. Elevation of the pulmonary capillary pressure demonstrates the inability of the left ventricle to perform its pumping function properly, and elevation of the caval and rt. atrial pressure indicates a reduced ability of the rt. ventricle to contribute to the forward movement of blood. Consideration of the course of events occurring after surgery have impugned the role of myocardial fibrosis and atrophy in relation to the functional disability of the heart. Thus it may be concluded that the primary cardiac problem is inability of the ventricles to expand in diastole and to accommodate the inflow of blood from the atria, plus the mal-

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12. Sawyer, C. G., and others: Chronic Constrictive Pericarditis: Further Consideration of the Pathologic Physiology of the Disease, *Am. Heart J.* 44: 207, 1952.

function caused by a diseased myocardium. These factors combine to cause a low, fixed stroke volume and a low minute cardiac output. The heart attempts to compensate for its low output by tachycardia and by hypervolemia. It also attempts compensation by means of increased diastolic filling pressure, resulting on the left side in chronic pulmonary congestion and on the right side in venous hypertension, ascites, edema, and hepatomegaly. The necessity for increased ventricular diastolic filling pressure was brought out also by Carter¹¹ in his experimental work by the demonstration that either ventricle, when constricted by disease, builds up a high (170 mm. Hg) pressure on filling with a small volume (60 cc.) of blood. In the normal dog heart, the right ventricle accommodates 120 cc. of blood at a pressure of 60 mm. Hg., and the left ventricle 100 cc. blood at 120 mm. Hg. Further manifestations of the impaired circulation are seen in the prolonged circulation time, and the increased arteriovenous oxygen difference.

In dealing with chronic tuberculous pericarditis, it has been evident, both before and since the advent of antituberculous chemotherapy, that surgical removal of the diseased pericardium (decortication) has been a major contribution. Burwell,¹³ in discussing 57 operative cases, states that most of the patients are improved and many returned to normal or near normal activity. Follow-up physiologic studies, however, demonstrate that many of them fail to recover normal hemodynamic status. There are many reasons why surgical decortication of the heart has not achieved uniformly highly satisfactory results. Residual disability may result from impaired liver function, obesity, renal disease, chronic pulmonary disease, pleural tuberculosis with chronic constrictive pleuritis, valvular disease, and cardiac arrhythmias, particularly atrial fibrillation.¹³ There is also the problem of continued activity of the tuberculous infection in various parts of the body. However, probably the two main reasons, in relation to the heart, for continued disability following surgery, have been chronic myocardial disease and inadequate surgical decortication. It is now recognized that in the acute stage of the disease there is an acute myocarditis with round cell infiltration, and that this progresses as a chronic myocarditis leading to degeneration, atrophy, and fibrosis. Prevention and treatment of the myocarditis is based on the early use of antituberculous chemotherapy. In regard to the type of surgical decortication performed, prior to the more accurate elucidation of the pathologic physiology of the heart in this disease, attention was paid to the vena cavae, the atriocaval junction, the atria, and the atrioventricular groove, and the ventricles themselves

were often somewhat neglected. As described above, current thinking assigns high priority to surgical release of the ventricles, most particularly the left ventricle.

In addition to the above outlined improvements in our understanding and treatment of this disease, there is currently being suggested a new approach to the problem which involves surgical removal of the diseased pericardium during the effusive stage of the disease.¹⁴ We have recently managed three patients in this manner with gratifying results. Contrary to one's possible initial impression, this program is actually quite safe and has several very marked advantages. First, pericardiectomy in the effusive stage of the disease is technically easier to do and therefore safer for the patient. In the chronic constrictive stage, the fibrous, caseous, calcified pericardium is intimately adherent to the myocardium, and its removal sometimes involves such technical accidents as injury of a coronary artery or actual perforation of the atrophic myocardium. Second, it has been shown that surgical resection of the pericardium can be carried out, even in the presence of active disease, without the danger of dissemination of the tuberculous infection. Several authors¹⁴ have reported small series of cases operated on during activity of the disease, and no patients have had a postoperative spread. Of paramount importance in this regard, of course, is treatment with antituberculous chemotherapy before, during, and after the surgery. Third, it is important to realize that constriction will follow acute tuberculous pericarditis in a significant number of cases, and that in those patients who reach the effusive stage a cessation of the effusion is usually promptly followed by signs of cardiac compression. Thus the disease is insidiously progressive, despite chemotherapy, and it is felt that early pericardiectomy should be utilized to shorten the total morbidity, prevent myocardial atrophy and damage, and reduce the total mortality. Our thinking should be directed toward the treatment of chronic constrictive pericarditis by the simple expedient of preventing it.

We now conceive the general program for management of tuberculous pericarditis to be as follows: Antituberculous chemotherapy should be instituted immediately in order to control general toxicity and in order to control the tuberculosis in the lungs and other parts of the body. This drug treatment will cut down the inflammatory reaction in the pericardium and possibly prevent its progression, but will, more importantly, prevent a serious degree of myocardial inflammation. If any evidence of constriction develops or if the disease

13. Burwell, C. S.: Constrictive Pericarditis, *Circulation* 15: 161-163, 1957.

14. Holman, Emile, and Willet, Forrest: Treatment of Active Tuberculous Pericarditis by Pericardiectomy, *J. A. M. A.* 146: 1-7, 1951.

progresses to the effusive stage with thickened, diseased pericardium, then surgical decortication is indicated. In preparing patients for surgery, there should be an appropriate cardiac diet, plus diuretics. Digitalis should be instituted to assist the myocardium, and, in particular, digitalization is necessary before and during surgery in order to prevent acute dilatation of the released heart. The patient should come to surgery with a low stable weight, and immediately prior to surgery all fluids should be removed from serous cavities. Regarding the actual surgical procedure, the transsternal approach is desirable for its maximum exposure of the entire heart. Hypothermia has been suggested, but probably is undesirable in view of the decreased efficiency and greater propensity to serious arrhythmias of the hypothermic heart.¹⁵ The entire heart should be decorticated if possible, but

15. Edwards, W. Sterling; Tubey, S.; Reber, W. E.; Siegel, A., and Bing, R. J.: Coronary Blood Flow and Myocardial Metabolism in Hypothermia, *Ann. Surg.* 139: 275-281, 1954.

particular attention must be given to the ventricles. The ventricles must be completely released so that they can be observed to expand satisfactorily in diastole and contract vigorously in systole. If the rt. ventricle is decorticated first, and its myocardium is efficient, the rt. ventricular output will be suddenly increased and the lungs will be flooded with blood before the left ventricle can accommodate this increased load. Consequently, it is desirable to decorticate the left ventricle first during the operative procedure. Accurate measurement of cardiac output should be made before and after decortication.

SUMMARY

Newer concepts of the etiology, clinical course, and pathologic physiology of tuberculous pericarditis are discussed. The great morbidity and high mortality rate can be best combatted by the use of antituberculous chemotherapy and by the application of surgical decortication earlier in the course of the disease.

LARYNGEAL CANCER

HOWARD S. J. WALKER, JR.

Mobile, Alabama

Although cancer of the larynx is a fairly common disease, the treatment varies widely. One difficulty in the comparison of results of therapy is the lack of uniform methods of reporting. Since there are marked differences in the natural course of the disease, and some of these can be predicted with a fair degree of accuracy, each diagnosis should be as precise as possible. The minimum description should include the microscopic diagnosis, the gross and microscopic limits of the tumor, and the status of the cervical lymph nodes.

PATHOLOGY

For purposes of study the larynx may be divided into two main areas:

1. The endolarynx, which is surrounded by the cartilaginous frame and is composed of the true vocal cords, the laryngeal ventricles, and the ventricular folds or false cords.

2. The laryngopharynx or extrinsic larynx, which includes the epiglottis, the aryepiglottic folds, the arytenoids, and the pyriform sinuses.

Most malignant tumors of the larynx are epidermoid carcinomas which vary greatly in morphology and clinical course. These metastasize primarily by the lymphatics to the regional cervical lymph nodes. At a later period, blood-borne distant metastases may take place. Tumors of the true cords stay localized longer than do those of the laryngopharynx. The location of the primary

tumor is more important in determining the ability to metastasize than is the microscopic appearance. Cancers of the endolarynx cause marked symptoms before metastasizing to the lymph nodes, but similar lesions of the extrinsic larynx frequently present with widespread cervical metastases as the initial symptom. Although there may be early lymphatic invasion, this is usually limited to the neck even until death. Consequently, wide surgical removal is frequently curative.

DIAGNOSIS

Any patient with persistent hoarseness, cough, dyspnea, hemoptysis, pain in the neck or ear, dysphagia, lump in the neck, or unexplained chest disease should be strongly considered for the diagnosis of cancer of the larynx. More than one disease occurs frequently in the age group most commonly affected, so one has to be alert to avoid overlooking a tumor of the larynx whose symptoms could be explained by some other known, existing condition. Indirect laryngoscopy is by far the most important method of diagnosis. Most of these tumors are easily seen with a laryngeal mirror and headlight or reflector. There are certain areas which may be difficult to visualize completely on one examination, and some of the primary tumors are only a few millimeters in greatest diameter. Repeated, careful, systematic mirror examinations should be done before a final

negative diagnosis is warranted. Direct laryngoscopy under local or general anesthesia is sometimes very helpful, particularly to obtain a satisfactory biopsy. X-ray studies by means of routine films, tomograms, and fluoroscopy with a barium swallow are useful adjuncts but cannot be depended upon in the usual case. Chevalier Jackson, Sr., said, "Death lurks behind the overhanging epiglottis." This is not as generally appreciated as it should be, for many of these tumors are greatly advanced before a determined effort to establish a definitive diagnosis is made. Diagnosis usually follows suspicion.

TREATMENT AND PROGNOSIS

Radiotherapy and surgery both play important roles in controlling this disease, and each has certain advantages.

1. Small tumors of the true cord can be irradiated or removed surgically with preservation of a relatively normal voice and good expectation of cure by either method.

2. Larger tumors of the endolarynx which would require a total laryngectomy may be irradiated, but the cure rate with this is less than with surgery. Since irradiation does conserve the voice, there may be some virtue in treating these initially with x-ray, and operating only on the recurrences. The time lost during treatment and while waiting for the recurrence to be manifest diminishes the chance of cure by later surgery. It becomes a difficult problem in this particular group, and the mutilation of a laryngectomy must be weighed against the danger of losing the best or only chance of cure while trying to save the voice.

3. Cancers of the laryngopharynx do poorly with any type of treatment. Usually the changes produced by surgery are no more debilitating than those of irradiation, and surgery offers a somewhat better cure rate.

4. Lymph node metastases are very resistant to irradiation, but can be controlled in many instances by wide dissections.

5. Hopelessly advanced lesions may be palliated by irradiation.

The advantages of irradiation are simplicity, conservation of tissue, and palliation when cure cannot be anticipated.

Surgery has only one advantage but it is an important one. The cure rate from surgery is definitely better than that from any other method. It would then appear that those cases which have a reasonable chance of cure by x-ray should be irradiated, and the others, not too hopelessly advanced, should have surgery. The only reason why these conclusions can not be immediately transformed into action is because different men have diverse opinions as to the relative merits of

x-ray vs. surgery. The majority would recommend surgery for large lesions and for lymph node metastases. Beyond this, agreement is limited. The value of preoperative and postoperative irradiation is unlikely to be settled until and unless some overwhelmingly successful modality is found.

CASE REPORTS

In the July 1953 issue of this Journal I reported cases of cancer of the larynx treated by various combinations of surgery. This is the follow up:

1. The patient was a 63 year old Negro male who had a huge, well differentiated, epidermoid carcinoma of the true cords, without gross or microscopic evidence of lymph node metastases. A total laryngectomy, with bilateral partial neck dissection, was performed en bloc 4 Feb. 53. He developed an excellent esophageal voice which was understandable over the telephone. Four years after surgery he showed evidence of wide recurrence throughout the left side of his neck, and he died 4 years, 6 months following his original treatment.

2. The patient is a 66 year old white male who had an extensive, anaplastic carcinoma of the right true cord which involved the laryngeal ventricle and the false cord. A total laryngectomy and right radical neck dissection were done 5 March 53. There was no microscopic evidence of lymph node metastases. He has never learned to talk, but is living and well since surgery 4 years, 7 months ago.

3. The patient is a 58 year old Negro male who had an extensive epidermoid cancer of the laryngopharynx which involved the epiglottis, the right aryepiglottic fold and the arytenoid, and had metastasized to the cervical lymph nodes bilaterally when first seen.

1st Operation—26 June 52: A bilateral radical neck dissection, together with a laryngectomy, was done in one stage. A portion of each internal jugular vein had to be excised because of the attachment of cancerous nodes to them. The defects in the veins were closed so as to narrow the lumina but not completely interrupt the flow of blood. Dr. Perzik had already reported two laryngectomy cases with complete interruption of both internal jugular veins simultaneously, but I was unaware of his article at that time, and it seemed wise to preserve some of the jugular return. The patient made a smooth recovery, and was asymptomatic for 22 months. He then developed a mass in the left neck.

*2nd Operation—22 May 54—*The neck was explored and a recurrent carcinoma found. This completely surrounded the bifurcation of the carotid artery. A biopsy was done, and he was advised to have further surgery.

*3rd Operation—28 August 54—*He did not return for operation until the mass became ulcerated and painful. At this time the mass measured 6.0 x 7.0 x 4.0 cm. A large pedicle flap was raised on the chest wall to cover the neck when the tumor was removed.



Fig. 1. Patient No. 3 after total laryngectomy and bilateral radical neck dissection (1st operation).

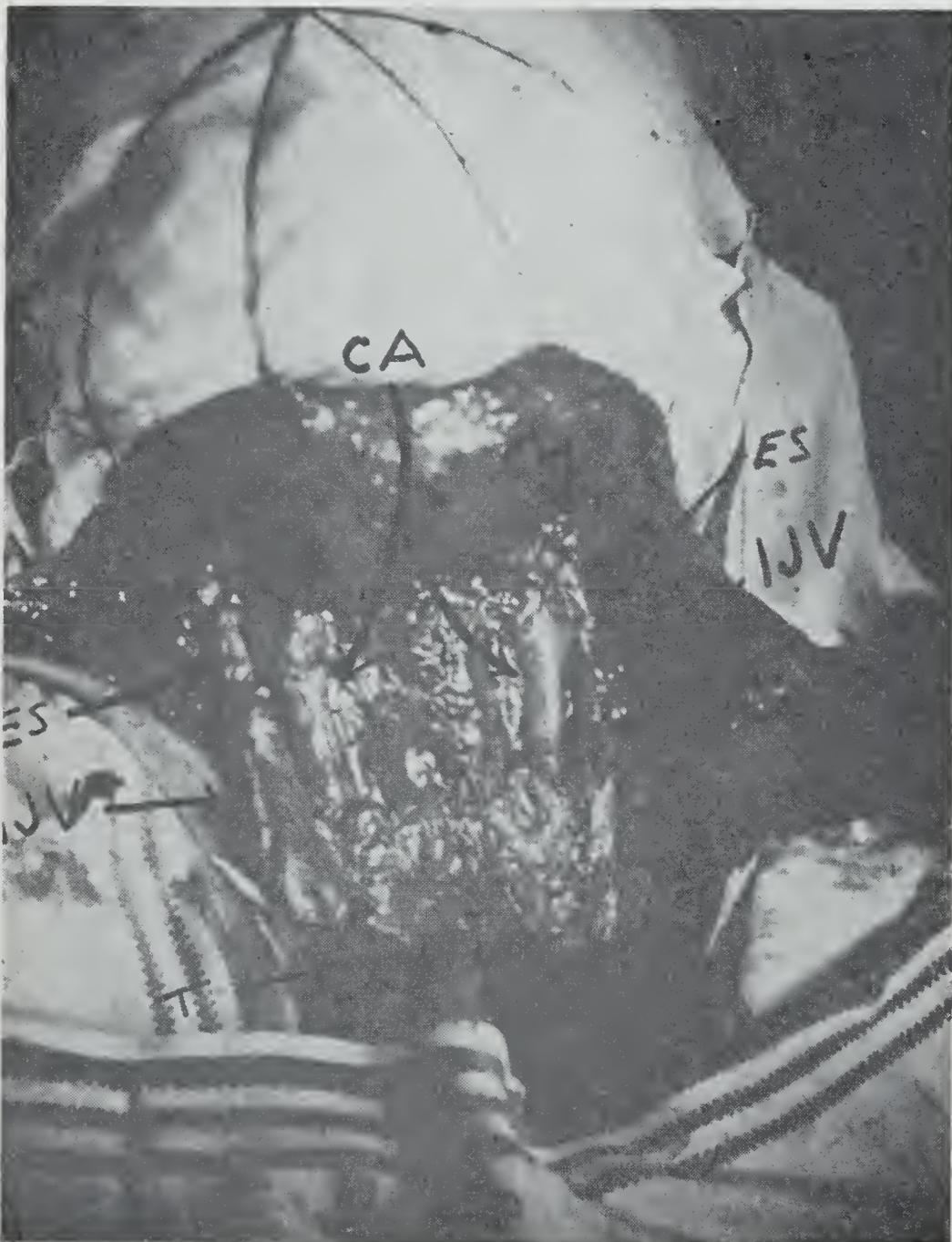


Fig. 2. Patient No. 3 at time of first operation: CA—Carotid arteries; M—Mandible; IJV—Internal jugular vein; ES—Excised segment from each jugular vein. Veins have been reconstructed in this photograph; T—Endotracheal tube in trachea.



Fig. 3. Patient No. 3 after removal of recurrent cancer involving the carotid artery. The vein graft has been inserted, and the graft covered by the pedicle flap from the chest wall. The donor site on the chest wall has not been grafted yet. This is after the 4th operation.

*4th Operation—16 Sept. 54—*The recurrent cancer, the entire cervical portion of the left carotid arteries, and the narrowed left internal jugular vein were removed. The arterial defect was bridged by a graft taken from the left saphenous vein. The pedicle flap was used to cover the vein graft.

*5th Operation—2 Oct. 54—*The donor site on the chest was covered by a split graft from the thigh. He stood all of these procedures well and was discharged from the hospital a week after the last operation.

*6th Operation—12 Oct. 54—*He was readmitted with a huge hematoma under the pedicle flap. This was caused by a pinpoint rupture at the lower end of the carotid artery and the vein graft. There was so much dissection into the surrounding tissues with inflammation that total excision of the vein graft was considered safer than repair of the rupture. The ends of the carotid artery were then sewed across separately. The removed graft was patent, but was partially compressed by the hematoma.

*7th Operation—15 Oct. 54—*The wound broke down and was closed secondarily. He was discharged a few days later, and has had no more trouble. He does heavy farm labor, and is a happy, grateful patient. He has never developed an esophageal voice, but this is no handicap to him. There have been no detectable mental changes, and no headaches despite the fact that the left carotid arteries, the left internal and external jugular veins, and the anterior and right external jugular veins have been completely interrupted; and the right internal jugular vein has been narrowed by removal of a segment from the side. It

has been 5 years since the original laryngectomy, and 3 years since the last operation for recurrence.

DISCUSSION

Cancer of the intrinsic and extrinsic larynx may be treated by irradiation or surgery, but the cure rate by surgery is considerably better than by any other means. Small tumors of the true cords may be the best candidates for x-ray therapy as well as for surgery. The possibility of lymph node metastases can be predicted more accurately from the location of the tumor than from the microscopic appearance. Dr. Regato has stated, "The are severe limits to morphology."

This is no where more evident than in the attempt to predict the course of a laryngeal cancer from the micropathology. Many of these tumors do not metastasize until late, and the metastatic deposits usually remain above the clavicles until the patient dies. Aggressive and even repeated attempts at eradication of the disease in the neck is often worth while.

The only one of the patients reported who had a well differentiated cancer died of widespread metastases 4 years, 6 months after the laryngectomy. The last one had a superficial spreading type of cancer of the laryngopharynx with bilateral fixed nodes at the time he was diagnosed. By all available criteria he was well nigh hopeless then, but has enjoyed prolonged control of his disease by extensive surgery.

SUMMARY

1. Some advanced cancers of the larynx may be greatly helped by radical surgery.
2. One unusual case is described in detail.

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Fingerprints Can Be Removed by Surgical Technique—Fingerprints, always considered to be permanent and unalterable, can be completely removed by the surgical technique of skin planing, according to a New Orleans doctor.

Two Detroit physicians also reported that they have proved an assumption of law enforcement officials that

prints of the second or dermal layer of skin can be used for identification purposes as well as those of the top layer or epidermis.

Their reports appeared in the January Archives of Dermatology, an American Medical Association publication.

Dr. James W. Burks, Jr., of the Tulane University School of Medicine division of dermatology, said his preliminary report has important legal implications because the possible removal of fingerprints makes positive identification by this means uncertain.

He treated two men with arsenic-caused horny growths on the hands by planing the skin with a high speed electric wire brush. At the same time, he planed a finger of each man, removing the epidermis and the upper part of the dermal layer. Skin planing is often used to remove scars from acne or smallpox.

Weeks after the planing, the fingers were smooth, slightly pinker, and without visible ridges. A hand lens showed the normal arrangements of whorls to be replaced by minute, thin, criss-crossed and parallel lines similar to those on the back surface of the web between the thumb and index finger.

Dr. Burks warned dermatologists that they must guard against treating criminals who seek to have their fingerprints removed. He added, however, that criminals who have this means of identification altered may still be recognized through "other equally satisfactory means." In fact, the "very absence" of ridge patterns on fingers could reflect an attempt to conceal identity. Dermatologists can help law enforcement officers in determining the medical reasons for a person's having planed fingers, he said.

The Detroit physicians, Drs. Harold Plotnick and Hermann Pinkus, ran an experiment on the similarity of epidermal and dermal fingerprints. Using recently amputated fingers, they first took prints of the epidermis. They then removed the epidermis and took prints of the dermis.

The two prints were identical except that the ridges of the dermal print appeared split or double, as well as finer than those of the epidermis. The dermal print is "just as effective for identification purposes," they said.

Their study resulted from an actual case in Boston in which Dr. Pinkus was asked by the police to explain the difference between epidermal and dermal fingerprints.

The police had found the body of a man and suspected that he had been murdered by his wife and dumped into the water. All the skin had come off the fingers, but prints were taken from the denuded dermal surfaces. It was up to the police to convince the jury of the identity of these prints with ordinary prints on file.

"They built up a nice case with the information, but the wife confessed just before the trial opened, so all the effort had been for nought," the doctors said.

It did, however, lead to the study proving the validity of dermal prints as a means of identification.

AMA Plans Second Legal Conference in May—Legal problems currently facing individual physicians and organized medicine will be the primary discussion topics at the second meeting of state and county medical society executive secretaries and attorneys May 9-10 at the Drake Hotel, Chicago. Before the final agenda can be set up, the AMA Law Department hopes that medical societies will send in their suggestions on specific legal subjects that would be of the most interest to them. The first such meeting—also sponsored by the Law Department—was held in April 1956.

CHOLECYSTECTOMY

A BRIEF REVIEW, WITH FOLLOW UP ON ONE HUNDRED CONSECUTIVE PERSONAL CASES

JOHN L. CARMICHAEL, M. D.

Birmingham, Alabama

Although gallbladder disease has been recognized for many centuries, the effective surgical attack on it was begun less than one hundred years ago.¹ At first, cholecystostomy was the common operation, probably because it was a much easier and safer operation to perform; and also, probably, because preservation of the gallbladder was considered, by some, as essential to good health.

As experience with cholecystectomy was gained and a comparative study of the two operations was made in large series of cases, it was found that cholecystectomy was the operation of choice.¹ Now cholecystostomy is relegated to the very poor risk case with severely acute disease.

In many instances the etiology of acute gallbladder disease and the sequence of events have been pretty generally accepted to be this: First, there is an occlusion of the cystic duct, followed by muscular contraction of the gallbladder which becomes sufficiently tense and continuous to occlude, by pressure, the veins of the gallbladder wall. This produces an edema of the gallbladder wall and probably transudation of tissue fluids into the gallbladder cavity. Chemical action of the bile on the gallbladder mucosa also plays a part in the acute process. With the increased compression thus produced, the branches of the cystic artery are occluded. According to Lounsbury,² areas of gangrene in the gallbladder wall may appear within 48 hours in 5% to 10% of such cases.

After the cystic duct has been obstructed for 48 hours to 72 hours, bacteria become active and an infection ensues producing an acute cholecystitis.

The acute attack may be aborted by release of the cystic duct obstruction from the slipping of a stone back into the gallbladder or by its passage into the common duct. Barksdale and Johnston³ have estimated that this happens in 80 to 90% of the cases. The pathologic process then recedes, with probably a residual fibrosis which permits the diagnosis of chronic cholecystitis. If this is repeated many times, there develops gradually the contracted and fibrosed gallbladder that we see frequently, especially in the older age group. Bor-

land and Jaehning⁴ state that cystic duct obstruction is due to stones in 95% of the cases.

Among chronic intra-abdominal infections, Babcock⁵ states that cholecystitis ranks second, being exceeded only by appendicitis. In 1000 postmortem examinations, Crump⁶ found gallstones in 8.8% of the age group from 20 to 30, in 24.6% of the group from 40 to 60, and in 53% of patients over 80 years of age. Babcock⁵ states that in 50% of the cases of cholecystitis the appendix is also diseased. In our series of cases there is a high incidence of prior removal of the appendix, presumably, in most cases, for acute infection. It is interesting, also, that in three of our cases there was an existing peptic ulcer. This is in keeping with the postulated common association of these two diseases.

Of interest is the incidence of acute cholecystitis following surgery on other organs. Glenn⁷ reported 17 such cases in 1947, Schwegman and DeMuth,⁸ 17 in 1953 and Leon⁹ 21 in 1954. In one of our cases of acute cholecystitis we had done a subtotal gastrectomy approximately one week previously.

The symptomatology of right upper quadrant pain beginning in the epigastrium and radiating to the right scapula and shoulder is in keeping with Kuntz¹⁰ opinion that the majority of the nerves supplying the biliary tract are from the sympathetic system arising in the ganglia from T-6 to T-12. Womack and Crider¹ have shown from a review of the literature that stimulation of sympathetic fibres primarily produces epigastric pain, whereas vagus stimulation produces chiefly dyspepsia and vomiting. We have been surprised to find that in our very severely acute cases the back pain is overshadowed and not noticed by the

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patient. In the acute case, the history and physical examination play the greater role in diagnosis. In the chronic case, however, the x-ray assumes a much more important place. The presence of stones in a functioning gallbladder makes x-ray diagnosis easy. The non-functioning or non-visualized gallbladder presents a more difficult problem. Rarely, if ever, should one make a diagnosis of cholecystitis in such a case without a repeat x-ray. Then, of course, one would still fail in the diagnosis of a congenitally absent gallbladder. Recently, Howard¹¹ reported that, following severe injuries in any part of the body, cholecystography frequently shows temporary non-visualization. After the reaction to the trauma is over, x-ray studies may reveal a normal gallbladder.

After the diagnosis of gallbladder disease has been made, the indication for surgery must be considered. Most surgeons will probably agree with Lounsbury² on the following indications for surgery: 1. the history of repeated gallbladder disturbances, 2. x-ray evidence of stones, or 3. one or more attacks of acute cholecystitis. It would seem that, as a general rule, any gallbladder that is proven to be the site of recurrent disease should be removed. This would include all gallbladders with stones. The general consensus seems to be that 2% of all gallbladders with stones sooner or later develop carcinoma. A much higher percentage will have common duct stones. A fairly high percentage will develop acute cholecystitis, and some of these gangrene and perforation. Some will develop pancreatitis because of their gallbladder disease. When one balances these risks against a less than one per cent operative mortality, cholecystectomy, it would seem, is clearly indicated in all such cases where the patient's general condition indicates an average or better than average risk. The high rate of occurrence of acute cholecystitis in the elderly and the frequency of gangrene and perforation in the acute gallbladders of the aged argue strongly for a liberal attitude towards the indication for surgery in any diseased gallbladder. Colcock¹² states that biliary tract disease is the commonest condition calling for abdominal surgery in the aged. The high incidence of the acute disease in the elderly is noted in our group of cases.

Although one accepts the above conclusions, there is still the question of when to operate in the case of the acute gallbladder. The consensus seems to be that if one sees the case in the first 24 to 48 hours, that is before the period of bacterial invasion has arrived and he can be sure of the di-

agnosis, he should not delay the operation. It appears to be the opinion of almost everyone that, if the patient comes to the surgeon after the period of bacterial invasion has begun, surgery should be done as soon as the electrolyte and general status of the patient can be brought to its optimum condition. During this time, antibiotics should be given. The arguments for this are that the gallbladder may become gangrenous and may also perforate and a peritonitis or abscess may develop.

Notable among those who oppose this viewpoint are Doubilet, Reed and Mulholland.¹³ After a discussion of the subject they concluded that the definitive treatment for acute cholecystitis is operation performed during the quiescent stage of the disease. They state that hospitalization and active therapy are mandatory but that emergency surgery rarely is. When emergency surgery is done, they believe it should be limited to cholecystostomy, preferably under local anesthesia. They recommend, as active treatment, nasogastric suction to rest the biliary and pancreatic systems. They state that sedation in the form of Demerol and sodium phenobarbital should be used intramuscularly. They recommend also the intramuscular use of anticholinergic drugs such as atropine and Probanthine. In addition, they give antibiotics for infection. They state that the incidence of free bile in the peritoneal cavity as a complication of acute cholecystitis is so small, and the condition so innocuous with proper non-operative treatment, that its prevention should not be the sole basis for treatment. Evidence of perforation was found at delayed operations in 18% of their 55 patients. Sixteen per cent of patients with the diagnosis of cholecystitis on admission were found to have acute pancreatitis. They report 2 deaths in 124 cases treated conservatively.

Another problem in gallbladder surgery is the common duct stone and the question of when to explore for it. Buxton and Burk¹⁴ state that this is no problem to some surgeons since they explore the duct routinely. Most surgeons, however, explore on the basis of certain criteria. Chief among these criteria are 1. the presence of jaundice, 2. palpable stones in the duct, 3. presence of stones in the gallbladder with a cystic duct large enough to pass them, 4. a dilated or thickened common duct, 5. biliary colic without stones in the gallbladder, and 6. thickening or induration of the head of the pancreas. Exploration of the duct does not always insure that all stones present were removed. Buxton and Burk reported, from a study of 439 chole-

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dochotomies, 26 cases in which subsequent cholangiograms revealed retained common duct stones. Johnston, Waugh and Good¹⁵ found, in 12 cases, evidence of residual stones out of 153 cases followed for 2 years or longer. The desire to avoid overlooking the common duct stone at exploration of the duct has led to the use of operative cholangiograms. However valuable these may be, Norman¹⁶ still found 26 cases of residual stones in 195 cases in which operative cholangiography was done.

This brings us to a consideration of the cases with residual symptoms after cholecystectomy. Undoubtedly some of these, and maybe more than we have formerly suspected, are due to residual common duct stones. Dilated cystic duct stump and spasm of the sphincter of Oddi may account for some also. Womack and Crider¹ doubt that the dilated cystic duct stump is the cause of continuing pain. They attribute the pain to an associated neuroma involving the plexus of nerves surrounding the duct. According to Stembridge¹⁷ the first mention of such a condition was in 1946 when Cieslak and Stout referred to such a case. Diaphragmatic hernia, peptic ulcers and lesions of the spinal nerves may also be the cause of such continuing symptoms.

Lest we become pessimistic following the recital of such difficulties with cholecystectomy, a quotation from the article by Womack and Crider¹ is given. "Where the patient gives a history of a typical biliary colic on several occasions and where there is a history of nausea and vomiting and dyspepsia, the surgeon can usually anticipate a successful outcome. If to this history are added the physical findings of tenderness in the gallbladder region and non-visualization of the gallbladder or presence of stones in the gallbladder, the surgeon can usually anticipate that 80 to 95% of his patients will be relieved of their symptoms following cholecystectomy."

It was thought that it might be worth while to follow up one hundred consecutive personal cases on which operations had been done. Accordingly a questionnaire was sent to all patients not known to be deceased. There were three of the latter group, two who died beyond the operative period of inoperable carcinoma of the gallbladder and one who died at home suddenly three weeks after sur-

gery. The cause of this latter death was not definitely established but was presumed to be from an embolus. However, coronary occlusion was not disproved. She was an obese colored female, age 52, on whom we repaired a large umbilical hernia at the time of the cholecystectomy. She had had a smooth recovery until the time of her sudden death, three weeks after surgery.

A summary of the material of this study is given in Table I. It is realized, of course, that nothing of great statistical significance can be obtained from a series of only 100 cases but certain trends in treatment and results can be observed.

TABLE I
MATERIAL

Number of cases.....	100
Carcinoma (surgery, died later).....	2
Surgery, benign condition.....	98
Operative deaths.....	1
Deaths later (presumably due to other than biliary tract disease).....	5
Left for follow up study.....	92
Lost to follow up study.....	12
Total follow up.....	80

Some of the data concerning the findings and technique of operation are analyzed in Table II.

TABLE II
FINDINGS AND OPERATIONS

Number with stones.....	74
Number without stones.....	26
Common duct explored and stones found.....	8
Common duct explored and no stones found.....	6
Not explored.....	86
Duodenum opened.....	3
Appendix removed.....	34
Appendix, left in.....	11
Appendix, previous removal.....	22
Appendix, questionable previous removal.....	33

It is of some interest that 26 of the one hundred cases presented had no stones at time of operation. As will be noted later, the degree of relief from operation experienced in the two groups of cases was not very different. The number of explorations of the common duct (14%) is much lower than in some reported series but higher than in some others. It was necessary to open the duodenum in three cases, two for impacted stones and one for stricture at the ampulla. It was felt that if it is difficult to pass a small dilator through the ampulla when the common duct is explored, it is safer to open the duodenum and dilate or remove an impacted stone under direct vision. It is simple, as Mulholland has suggested, to pass a rigid probe, such as a uterine sound, to the ampulla and with this to "tent" the anterior wall of the duodenum. The duodenum can be incised over the end of the probe and one will have the ampulla directly beneath the opening in the duodenum. If need be, the ampulla can be made to protrude through this opening.

15. Johnston, E. V.; Waugh, J. M., & Good, C. A.: Residual Stones in the Common Bile Duct: The Question of Operative Cholangiograms, *Ann. Surg.* 139: 293 (March '54).

16. Norman, O.: Studies on Hepatic Ducts in Cholangiography, *Acta radiol., Suppl.* 84:1 (1951).

17. Stembridge, V. A.: Amputation Neuroma Following Cholecystectomy, *Ann. Surg.* 134: 1048 (Dec. 1951).

The association of appendicitis and gallbladder disease is suggested in the certain previous removal of 22 appendices and the questionable prior removal of 33 appendices. We were not able to determine with accuracy how many of these were incidental appendectomies.

The incidence, according to age in this series, was interesting to us. This is noted in Table III.

TABLE III
AGE INCIDENCE

Age	Cases
20-29	5
30-39	12
40-49	24
50-59	29
60-69	16
70-79	13
80-over	1

Thirty of the 100 cases were above 60 years of age and fourteen were above 70 years of age. When we compare these percentages with the percentage of the general population in each of these age groups, we see that cholecystitis becomes increasingly frequent in the older groups. This may be interpreted as a reason for more careful searching in the younger age group for gallbladder disease with the purpose of eradicating it before the period of greater risk arrives.

The sex incidence of 17 males to 83 females is not very different from the usual ratio.

Table IV gives the pathology as reported by the pathologists. The cancer diagnoses were made from metastatic tumor and not from the gallbladder directly. In the fifty-seven cases reported as chronic cholecystitis, there were an undetermined but rather large number who had had prior acute attacks of gallbladder disease.

TABLE IV
PATHOLOGY

Acute and subacute	27
Chronic	57
Cholesterosis	8
Diverticulosis	2**
Cancer	2
No disease	4*
Total 100	

*—Two of these had stones.
**—Both of these had stones.

The postoperative complications and associated conditions are listed in Table V.

TABLE V
POSTOPERATIVE COMPLICATIONS AND
ASSOCIATED CONDITIONS

Thrombophlebitis	1
Phlebothrombosis, embolus	1
Hernia	2
Common duct obstruction with reoperation	1
Paroxysmal tachycardia	2
Cholecystitis, acute, complicating subtotal gastrectomy	1
Associated peptic ulcer	3

The one case of thrombophlebitis was one in which an appendectomy for ruptured appendix many years before had been followed by thrombophlebitis. This case also accounts for one hernia. The hernia in this case has not been repaired and causes some disability. The other case of hernia has been repaired successfully.

The diagnosis of phlebothrombosis with embolus was only presumptive and occurred in the case in which a rather large umbilical hernia was repaired at the same time. Criticism for performing two such operations at the same time may be justified.

The case of common duct obstruction with reoperation was that of an elderly white male in whom a ruptured gallbladder was removed. Several years later, after several infrequent and brief attacks resembling pancreatitis, this patient became jaundiced. He was explored and a common duct which appeared to be larger than the duodenum was found. It was opened and much bile stained, thick, mucus-like material was removed. No stone was found. The ampulla did not seem to be obstructed. A long limbed T-tube was left in the common duct with one end extending into the duodenum. This was left in for about 8 weeks. He has had no further attacks of jaundice and few, if any, other symptoms which could be attributed to the biliary tract or pancreas.

One of the two cases of paroxysmal tachycardia in this series was especially interesting since her attack was continuous for about 72 hours. During this time her pulse remained at about 160 per minute and almost uncountable for the entire period. Her blood pressure also could hardly be obtained. She made, however, an eventful recovery. This gives some indication as to the benignancy of paroxysmal tachycardia.

The acute cholecystitis as a complication of subtotal gastrectomy occurred on the eighth day after operation although the gallbladder had no stones and was considered to be normal at the time of the gastrectomy.

The three cases of associated peptic ulcer tend to confirm an association between peptic ulcer and cholecystitis.

In attempting to evaluate the treatment in these one hundred cases of gallbladder disease, the following questionnaire was sent to 92 of the cases:

"With a desire to learn how much help we have given our patients by the treatment of their gallbladder disease, we have set out to study 100 consecutive cases. You are included in the 100 cases under consideration. Your careful answers to the following questions would be very helpful to us. If the results in your case should have been disappointing, please frankly state this in your answers. 1. Have you been entirely relieved of the trouble (symptoms) for which you were operated on? 2. Have you been improved but not entirely relieved by your operation? 3. Have you had no relief from your operation? 4. If you have not been entirely relieved, have you any of the following symptoms?"

Pain, if so, when in relation to food and where? Fullness in upper abdomen; Nausea and vomiting; Belching; Inability to eat certain foods, if so, what?; Jaundice; Any other symptoms? 5. Do you have any new symptoms that seem to have arisen because of the operation? If so, state what they are."

We obtained 80 replies to this questionnaire. Forty-eight reported complete relief and twenty eight additional ones reported partial relief. Four cases or 5% reported no relief.

In Table VI we have attempted to evaluate the treatment in relation to presence or absence of stones or the absence of pathologic evidence of disease. It is interesting that the sum of the percentages of total and partial relief in the stone and stoneless groups is the same.

TABLE VI
TREATMENT EVALUATION

Patients with Stones:		
Complete relief.....	37	61%
Partial relief.....	20	33%
No relief.....	3	5%
Patients without Stones:		
Complete relief.....	9	53%
Partial relief.....	7	41%
No relief.....	1	6%
Patients no Disease:		
Complete relief.....	2	67%
Partial relief.....	1	33%

Table VII records the incidence of the most common residual symptoms in the group which obtained only partial relief or no relief at all. It is perhaps significant that four times as many of the cases developed jaundice in the cases with stones as in the cases without stones. Stones may have been left in the common duct at operation.

TABLE VII
MOST COMMON RESIDUAL SYMPTOMS

Cases with Stones:	
Nausea and vomiting.....	5
Food intolerance.....	9
Pain.....	5
Jaundice.....	4
Cases without Stones:	
Nausea and vomiting.....	3
Food intolerance.....	4
Pain.....	2
Jaundice.....	1

SUMMARY

1. A brief review of the literature on the problem of gallbladder disease and its treatment is given.
2. An analysis of the operations, associated conditions and pathology in 100 cases personally operated on is presented.
3. An attempt is made to evaluate the results of treatment in these personal cases.

New Drug Called Most Effective Diuretic—A new drug, recently spoken of as "amazing" as a treatment for high blood pressure has been called the most effective agent now available for combating excessive fluid retention by the body.

The drug is chlorothiazide (Diuril). It is a diuretic which promotes the elimination of body fluids and salts through the kidneys. Last October two Boston physi-

cians announced that the drug, first thought to be only a diuretic, also has an "amazing" blood pressure lowering effect.

Four articles in the January 11 Journal of the American Medical Association deal with the various uses of the drug.

It is probably the most effective diuretic now available, mainly because of its lack of harmful side effects and its economy and ease of administration by mouth, according to Dr. Ralph V. Ford and associates of Houston, Texas. They said it is effective against all types of fluid retention.

A New York group, headed by Dr. John H. Laragh, found it to work against fluid retention caused by heart failure, cirrhosis of the liver, and nephrosis when all other measures had failed.

In discussing the drug's ability to lower blood pressure, Dr. Edward D. Freis and associates, Washington, D. C., said the drug appears to represent an important new development in the treatment of hypertension, but that a longer period of observation is necessary to evaluate its effectiveness fully.

Eight months, the longest reported period the drug has been given, is not long enough to determine the effectiveness of any treatment for hypertension or to rule out the possibility of delayed and as yet unsuspected harmful reactions, they said.

So far chlorothiazide has caused no side effects and patients have not reacted to the drug by needing larger and larger amounts to maintain the same effect. Side effects and tolerance frequently develop with the drugs usually given for high blood pressure.

Dr. Freis gave the drug alone or in combination with other antihypertensive agents to 73 patients. Chlorothiazide "markedly" increased the action of the other drugs and allowed discontinuance or reduction in dosage of the regular agents.

Advantages of chlorothiazide over other agents are that it is given by mouth and has a simple "rule-of-thumb" dosage schedule, the doctors said.

Dr. Frank A. Finnerty and associates, also of Washington, called chlorothiazide "ideal" for the prevention and treatment of toxemia of pregnancy. Toxemia is a general poisoning of the system due to the body's inability to eliminate poisons and waste materials.

Dr. Finnerty gave the drug to 144 pregnant women suffering from hypertension, toxemia, fluid retention, or a combination of these conditions. The drug relieved fluid retention in the early stages, thus preventing toxemia. It also relieved toxemia and reduced the blood pressure of those suffering from hypertension.

Two-Month-Old Babies Need Polio Shots—Polio shots for infants as young as two months were recommended in a guest editorial in the January 11 Journal of the American Medical Association.

At present shots are generally begun at six months of age. However, several groups of researchers have found that many infants lose the immunity with which they are born before they reach six months.

Dr. Lauri D. Thrupp, chief of the poliomyelitis surveillance unit of the U. S. Public Health Service's Communicable Disease Center, Atlanta, Ga., said the American Academy of Pediatrics has recommended beginning the shots at two months. The third shot should follow the first two by at least six or seven months.

During 1956, attack rates of paralytic polio were highest in one-year-old children and the largest proportion of cases occurred in the under-five-year age group, Dr. Thrupp said. Preliminary data for 1957 indicate that a comparably high proportion of paralytic cases is occurring in preschool-age children.

AMA Cites Doctor Placement "Success Stories"—How a local Grange led a community-wide campaign to attract a doctor and how a state medical society promoted the services of its doctor placement service are constant reminders of the work being carried on throughout the country to match communities needing a doctor with physicians seeking a suitable place to practice medicine. Typical community success story which has been brought to the attention of the AMA's Placement Service recently is that of Windsor's Cross Roads, N. C.—population, 125 families.

Here the 30-member Grange organized a community development organization to raise funds for a six-room medical clinic and encouraged Dr. Irvin G. Sherer and his wife to settle there after his discharge from the Navy. For its efforts in this project, the local Grange won the \$1,000 first prize in the North Carolina State Grange Community Service Contest and placed fourth in the National Grange Contest. All of the credit for this community's success goes to its citizens. The Medical Society of the State of North Carolina placement service simply sent Dr. Sherer a list of vacancies, and the citizens of Windsor's Cross Roads did the rest.

An example of how a state medical society promoted its doctor placement service is that of the Medical Association of the State of Alabama. A story last July in the Birmingham News—which later was written into the Congressional Record—points up the fact that 42 communities in the state need doctors and that young doctors oftentimes cannot afford to settle in small towns without some financial assistance. The article cites cases where communities have induced doctors to come to their areas by providing clinics, equipment or rent-free housing for the first years. In addition, the article explains how the placement service operates—emphasizing the fact that the society acts as a clearing house but that "it's up to the town and the doctor to get together."

Response to Shots Gives Clue to Emotions—A child's response to having a shot is a good clue to his emotional maturity, a Milwaukee pediatrician said recently.

A study of 133 children, ranging from tiny babies to 12-year-olds, who underwent 328 shots, showed changing responses as they grew older, Dr. Karl E. Kassowitz said in the January Journal of Diseases of Children, an American Medical Association publication.

He said the many shots and vaccinations that children must routinely undergo offer an excellent means for studying their psychology and measuring their maturity.

All children must learn self-control and develop pride in their "toughness," he said. Their reactions to shots show how well they have developed these traits.

During the first six months of life, children have no emotional response to having a shot. From the end of the first year through the fourth year there is the greatest amount of "more-or-less violent fear and resentment."

From the fifth year on there is a steady decline in fighting. After the eighth birthday fighting becomes the exception, and self-control and pride in being able to take the shot are the rule.

In fact, lack of self-control after the age of eight to nine may be considered a clue to an underlying emotional disturbance, Dr. Kassowitz said.

Nutrition Plays No Role in Arthritic Process—There is no special diet for the treatment of arthritis, according to the American Medical Association's Council on Foods and Nutrition.

In a special report prepared for the council, Dr. William D. Robinson, Ann Arbor, Mich., said joint diseases are "essentially diseases of the supporting structure of the body, the connective tissue." It is "extremely unlikely that the functioning of this tissue can be directly affected by dietary manipulation."

However, patients with diseases of the joints do need to pay attention to their diet, because of its effect on their general state of health, Dr. Robinson said.

Many diets and specific vitamins and minerals have been suggested for the treatment of arthritis, but research has failed to show any relationship between nutrition and the cause of most rheumatic diseases.

Gout is the only fairly common form of joint disease in which diet and the use of food by the body have been shown to affect the disease. Food allergy, high fat diets, and periods of fasting all precipitate gout attacks; therefore, patients need to watch their diets carefully.

Occasionally special diets are needed by persons with arthritis, even though they will have no effect on the disease itself. For instance, overweight patients often need to lose weight to reduce the load on the affected weight-bearing joints. Diets high in calories, proteins, vitamins, and minerals are sometimes necessary for patients who have lost weight and muscle tissue, a situation frequently encountered in rheumatoid arthritis.

Dr. Robinson noted that many forms of rheumatic disease are self-limiting, with a tendency to subside spontaneously after a varying length of time. Confusion of such conditions as bursitis or psychogenic rheumatism with various types of arthritis undoubtedly has been responsible for the claims of value for various diets and vitamins as treatments for arthritis.

Dietary treatment for the arthritic patient may be an important aspect of the total program of effective treatment, but such treatment "must be adapted to the general condition of the individual patient as well as to the type of rheumatic disease present," Dr. Robinson concluded.

He is in the department of internal medicine and the Rackham Arthritis Research Unit of the University of Michigan. His report appeared in the January 18 Journal of the A. M. A.

New AMA General Manager—A realignment of executive duties at the American Medical Association went into effect January 1. Dr. George F. Lull took over the position of assistant to the president. Dr. F. J. L. Blasingame of Wharton, Texas, assumed responsibility for over-all administration with the title of general manager.

Dr. Blasingame has been active in medical affairs, both at the state and national levels, for many years. Since 1949 he has been a member of the AMA Board of Trustees, and in 1955 he served as president of the Texas State Medical Association.

In his new job Dr. Lull will relieve the president of many of the burdens of that office in addition to serving as secretary of the Association. He will act as a special ambassador of the medical profession in cities and towns throughout the country. Dr. Lull joined the AMA staff in 1946 after serving 34 years in the Army. His last position before Army retirement was as deputy surgeon general.



Editorials

TREASURY DEPARTMENT U. S. BUREAU OF NARCOTICS

NARCOTIC "DONT'S" FOR THE PHYSICIAN

Don't leave prescription pads around.	Addicts want them for effecting narcotic forgeries.
Don't write a narcotic prescription in lead pencil.	Avoid writing any Rx in pencil, many are changed to call for morphine.
Don't write for narcotics this way: Morphine HT ½ # X or Morphine HT ¼ # 10.	Several X's or zeros can be added to raise the amount. Use brackets or spelling.
Don't carry a large stock of narcotics in your bag.	Addicts are on the lookout for these in doctor's offices and cars.
Don't store your office supply where patients can get at it.	Avoid storage near sink or urinal. The patient may ask to use these.
Don't fall for a good story from a stranger claiming ailment that usually requires morphine.	The addict can produce bloody sputum, simulate bad coughs or other symptoms. Make your own diagnosis.
Don't give a narcotic Rx to another without seeing the patient.	Addicts have posed as nurses to get doctors to prescribe narcotics.
Don't write for large quantities of narcotics unless unavoidable.	Diversion to addicts is a profitable business, as much as \$1 for ¼ grain M. S.
Don't prescribe narcotics on the story that another MD had been doing it.	Consult that physician or the hospital records whenever possible.
Don't leave Rx's signed in blank at the office for nurses to fill in.	Signed blanks are bad practice and many have been stolen by addicts.
Don't treat an ambulatory case of addiction. Addicts must be under proper control.	Addicts go to several MD's at a time. Notify this Bureau!
Don't dispense any narcotics without keeping a record of it.	Bedside and office administration are permitted without record.
Don't buy your office narcotic needs on Rx blank.	The law requires you to use an official order form.
Don't resent a pharmacist's call for information about an Rx you may have written.	The pharmacist is held responsible for filling forgeries. Please cooperate.
Don't hesitate to call the U. S. Bureau of Narcotics, Treasury Department, to get or give information.	It will be held strictly confidential.

The foregoing was sent to Dr. D. G. Gill in his capacity as secretary of the State Board of Censors with the request that it be called to the attention of the profession. Letter of transmittal said, in part:

"During the past several months there has been a series of burglaries in Alabama, many of them drug store burglaries in which narcotics were stolen. Narcotic thefts in Alabama have been far above average during that period. Although the burglars have concentrated on drug store stocks rather than the narcotic stocks of physicians, it is quite possible that such thefts will increase unless precautions are taken.

"It would be appreciated if you would call this matter to the attention of the members of the State Medical Association and urge them to take extra precaution in the safeguarding of their narcotic stocks as well as prescription pads and narcotic order forms."

ACTIONS OF THE HOUSE OF DELEGATES

AMERICAN MEDICAL ASSOCIATION

ELEVENTH CLINICAL MEETING

DEC. 3-6, 1957

PHILADELPHIA

Fluoridation of public water supplies, free choice of physician, the Heller Report on organization of the American Medical Association, the Forand Bill providing hospital and surgical benefits for Social Security beneficiaries, guides for occupational health programs covering hospital employees, distribution of Asian influenza vaccine, and guides for the medical rating of physical impairment were among the variety of subjects acted upon by the House of Delegates at the American Medical Association's Eleventh Clinical Meeting held Dec. 3-6 in Philadelphia.

Dr. Cecil W. Clark of Cameron, Louisiana, was named 1957 General Practitioner of the Year after his selection by a special committee of the Board of Trustees for outstanding community service. Dr. Clark, 33-year-old country doctor who was a medical hero during Hurricane Audrey last June, was present at the meeting to receive the gold medal which goes with the annual award.

Speaking at the opening session, Dr. David B. Allman of Atlantic City, A. M. A. President, called for "more freedom, not less, in America and in the medical profession." Dr. Allman urged the delegates to embark on local action campaigns to enlist full community support in opposition to the Forand Bill, a pending Congressional proposal which would provide hospital and surgical benefits for persons who are receiving or are eligible for Social Security retirement and survivorship payments. The Forand Bill, he said, is "cut from the same cloth" as national compulsory health insurance and "emanates from the same minds."

FLUORIDATION OF WATER

In settling the most controversial issue at the Philadelphia meeting, the House of Delegates approved a joint report of the Council on Drugs and the Council on Foods and Nutrition which endorsed the fluoridation of public water supplies as a safe and practical method of reducing the incidence of dental caries during childhood. The 27-page report on the study which was directed by the House at the Seattle Clinical Meeting one year ago contained these conclusions:

"1. Fluoridation of public water supplies so as to provide the approximate equivalent of 1 ppm. of fluorine in drinking water has been established as a method for reducing dental caries in children up to 10 years of age. In localities with warm climates, or where for other reasons the ingestion of water or other sources of considerable fluorine content is high, a lower concentration of fluoride is advisable. On the basis of the available evidence, it appears that this method decreases the incidence of caries during childhood. The evidence from Colorado Springs indicates as well a reduction in the rate of dental caries up to at least 44 years of age.

"2. No evidence has been found since the 1951 statement by the Councils to prove that continuous ingestion of water containing the equivalent of approximately 1 ppm. of fluorine for long periods by large segments of the population is harmful to the general health. Mottling of the tooth enamel (dental fluorosis) associated with this level of fluoridation is minimal. The importance of this mottling is outweighed by the caries-inhibiting effect of the fluoride.

"3. Fluoridation of public water supplies should be regarded as a prophylactic measure for reducing tooth decay at the community level and is applicable where the water supply contains less than the equivalent of 1 ppm. of fluorine."

FREE CHOICE OF PHYSICIAN

Acting on the issue of free choice in relation to contract practice, the House passed a resolution which reaffirmed approval of previous interpretations of the Principles of Medical Ethics by the Association's Judicial Council and directed that they be called to the attention of all constituent associations and component societies. One Council opinion, issued in 1927 and reaffirmed in Philadelphia, stated that the contract practice of medicine would be determined to be unethical if "a reasonable degree of free choice of physician is denied those cared for in a community where other competent physicians are readily available." The resolution also cited a Council opinion, published in the October 19, 1957 issue of The Journal of the A. M. A., which stated that the basic ethical concepts in both the 1955 and 1957 editions of the

Principles of Medical Ethics are identical in spite of changes in format and wording. This opinion added that "no opinion or report of the Council interpreting these basic principles which were in effect at the time of the revision has been rescinded by the adoption of the 1957 principles."

The 1927 Council report also pointed out that "there are many conditions under which contract practice is not only legitimate and ethical but in fact the only way in which competent medical service can be provided." Judgment of whether or not a contract is ethical, the report said, must be based on the form and terms of the contract as well as the circumstances under which it is made.

In another action related to the issue of free choice, the House adopted a resolution condemning the current attitude and method of operation of the United Mine Workers of America Welfare and Retirement Fund "as tending to lower the quality and availability of medical and hospital care to its beneficiaries." The resolution also called for a broad educational program to inform the general public, including the beneficiaries of the Fund, concerning the benefits to be derived from preservation of the American right to freedom of choice of physicians and hospitals as well as observance of the "Guides to Relationships Between State and County Medical Societies and the UMWA Welfare and Retirement Fund" which were adopted by the House last June.

THE HELLER REPORT

Acting on the report of the Committee to Study the Heller Report on Organization of the American Medical Association, the House reached the following decisions on ten specific recommendations:

1. The office of Vice-President will be continued as an elective office.
2. The offices of Secretary and Treasurer will be combined into one office to be known as Secretary-Treasurer, and that officer will be selected by the Board of Trustees from one of its number.
3. The duties of the Secretary-Treasurer will be separated from those of the Executive Vice-President.
4. The office of General Manager will be discontinued, and the new office of Executive Vice-President will be established. The latter, appointed by the Board of Trustees, will be the chief staff executive of the Association.
5. The Council on Medical Education and Hospitals and the Council on Medical Service will continue as standing committees of the House of Delegates but their administrative direction will be vested in the Executive Vice-President.
6. The voting members of the Board of Trustees

will be limited to eleven—the nine elected Trustees, the President and the President-Elect. The Vice-President and the Speaker and Vice-Speaker of the House of Delegates will attend all Board meetings, including executive sessions, with the right of discussion but without the right to vote.

7. The House disapproved of the proposal to elect the Trustees from each of nine physician-population regions.

8. The office of Assistant Secretary will be discontinued, and a new office of Assistant Executive Vice-President will be established.

9. The Committee on Federal Medical Services will be retained as a committee of the Council on Medical Service and will not become a part of the Council on National Defense.

10. The Speaker of the House will appoint a joint and continuing committee of six members, three from the Board of Trustees and three from the House, to redefine the central concept of A. M. A. objectives and basic programs, consider the placing of greater emphasis on scientific activities, take the lead in creating more cohesion among national medical societies, and study socio-economic problems.

The accepted recommendations were referred to the Council on Constitution and By-Laws with a request to draft appropriate amendments for consideration by the House at the 1958 annual meeting in San Francisco.

THE FORAND BILL

The House condemned the Forand Bill as undesirable legislation, approved the firm position taken in opposition to it, and expressed satisfaction that the Board of Trustees has appointed a special task force which is taking action to defeat the bill. In a related action, giving strong approval to Dr. Allman's address at the opening session, the House adopted a statement which said:

"It is particularly timely that our President has so forcefully sounded the clarion call to the entire profession for emergency action. With complete unity, definition and singleness of purpose, closing of ranks with all age groups and elements of our organization, we must at this time stand and be counted. Thus we can exert the physician's influence in every possible direction against invasion of our basic American liberties in the form of proposed legislation alleged to insure compulsorily one segment of the population against health hazards at the expense of all."

HEALTH PROGRAMS FOR HOSPITAL EMPLOYEES

A set of "Guiding Principles for an Occupational Health Program in a Hospital Employee Group" was approved by the House. The guides were developed by a joint committee of the American

Medical Association and the American Hospital Association and already had been formally approved by the A. H. A. They include these statements:

"Employees in hospitals are entitled to the same benefits in health maintenance and protection as are industrial employees. Therefore, programs of health services in hospitals should use the techniques of preventive medicine which have been found by experience in industry to approach constructively the health requirements of employees.

"It is essential that employee health programs in hospitals, as in industry, be established as separate functions with independent facilities and personnel. The fact that hospitals are engaged in the care of the sick as their primary function does not alter the necessary organizational plan for an effective occupational health program."

ASIAN INFLUENZA VACCINE

The House considered three resolutions dealing with the Asian influenza immunization program and then adopted a substitute resolution calling attention to "certain inadequacies and confusions in the distribution of vaccines" and directing the Board of Trustees to seek conferences through existing committees "with a view to establishing a code of practices regulating the future distribution of important therapeutic products so that the best interest of all the people may be served." The resolution pointed out that the American Medical Association already has a joint committee with the American Pharmaceutical Association and the National Association of Retail Druggists, in addition to a liaison committee with the Drug Manufacturers Association.

MEDICAL RATING OF PHYSICAL IMPAIRMENT

The House accepted a 115-page "Guide to the Evaluation of Permanent Impairment of the Extremities and Back" which was developed by the Committee on Medical Rating of Physical Impairment as the first in a projected series of guides. The delegates commended the committee for doing "a superb job on this difficult subject" and expressed pleasure that the guides will be published in The Journal of the A. M. A. The guides are expected to be of particular help to physicians in determining impairment under the new disability benefits program of the Social Security Act.

MISCELLANEOUS ACTIONS

Among a wide variety of other actions, the House also:

Directed that a new committee be established in the Council on Industrial Health to study *neurological disorders in industry*;

Noted with approval the establishment of the American Medical Research Foundation, which

will initiate and encourage necessary *medical research* and correlate and disseminate the results of studies already under way;

Decided that informational materials which are sent to A. M. A. delegates should also be sent to all *alternate delegates*;

Affirmed that it is within the limits of ethical propriety for physicians to join together as partnerships, associations or other *lawful groups* provided that the ownership and management of the affairs thereof remain in the hands of licensed physicians;

Instructed that the appropriate committee or council should engage in conferences with *third parties* to develop general principles and policies which may be applied to the relationship between third parties and members of the medical profession;

Urged state medical society committees on aging and insurance to make continuing studies of *pre-retirement financing of health insurance* for retired persons;

Endorsed a suggestion that the Committee on Federal Medical Services sponsor a national conference on *veterans' medical care* during 1958;

Asked the Board of Trustees to study the feasibility of having the Association finance a thorough investigation of the Social Security system by a qualified private agency;

Suggested that physicians and their friends make a vigorous effort to obtain Congressional enactment of the *Jenkins-Keogh Bills*;

Approved the "Suggested Guides to Relationships Between Medical Societies and *Voluntary Health Agencies*";

Strongly recommended that a completely adequate and competent medical department be established in the *Civil Aeronautics Administration* directly responsible to the CAA Administrator, and

Congratulated the General Electric Company for its medical television presentations on the subject of *quackery*.

MENTAL HEALTH ASPECTS OF ATOMIC ENERGY

Atomic power is news today in all parts of the world and everything concerned with this subject provokes an emotional reaction on the part of the public. Often perfectly healthy and reasonable, this reaction may also take the form of irrational fears and irrational hopes. Thus, with the advent of the atomic age, humanity seems to be faced with certain mental health problems, and these have been reviewed by a Study Group of the World Health Organization (WHO) at a meeting held in

Geneva under the chairmanship of Professor Hans Hoff of Vienna. Participating in this group were representatives of disciplines as different as psychiatry, atomic and radiation medicine, public health, social anthropology and journalism.

The Study Group examined reports from many countries concerning the emotional impact of atomic energy developments as reflected in everyday life, public statements, the press, letters to leaders in the atomic, health and political fields. . . They found that, in general, irrational fears were expressed far more often than irrational hopes. A reason for this might be found in the fact that people were first made aware of radiation as a means for diagnosing or treating two awe-inspiring diseases, tuberculosis and cancer. Then atomic energy was used as a weapon, and this had aroused a deep sense of fear, and in some people also of moral involvement and guilt, the Group said.

But there were also other factors influencing public attitudes to atomic energy. One of them was the mysterious, almost magical aura of atomic power. Atomic radiation was invisible, unheard, unfelt, apparently infinitely powerful yet springing from an almost infinitely small source and, as far as ordinary people were concerned, it was uncontrollable. It was credited with almost infinite potentialities for both good and evil, and represented man's most amazing success in his search for power. Now, the oldest myths and legends shared by mankind since the dawn of history showed that man's quest for power often resulted in terrible divine punishment: Prometheus stealing fire from the gods, Pandora unleashing forces she could not control, Faust evoking the Devil, the alchemists of the Middle Ages, all paid a heavy penalty for their daring. These tales were found in one form or another in nearly all cultures, as witness an ancient Egyptian saying: "When man learns what moves the stars, the Sphinx will laugh and life will be destroyed."

Perhaps the most terrifying and characteristic aspect of atomic energy for the popular imagination was that its tremendous power might get out of control. People were also beginning to fear a biological chain reaction: fall-out and atomic wastes would poison air, water and soil, then plants and cattle, then the men who ate them, and above all their children and their descendents. This, the WHO Study Group found, was a deeper and more subtle fear than that of the unleashing of energy that might destroy the universe.

MISTRUST IS SPREADING

The WHO Study Group further found that there was a widespread sense of disorientation in regard to atomic energy matters, and a mistrust of most information sources. For this state of af-

fairs, they said, there were many past and present reasons: wars, psychological warfare, political propaganda, etc. Even competitive commercial advertising contributed its share. Furthermore, science today had lost the infallibility with which it was credited in the nineteenth century and the publicizing of disagreements and contradictions among scientists, for example, about polio vaccine, or the cancer-producing effects of tobacco, had also contributed to this mistrust. Although a section of public opinion would always continue to place confidence in authoritative declarations, one could note in many countries a general distrust of scientific pronouncements. This mistrust was often reflected in deliberately anti-scientific attitudes.

Other factors which had contributed a disturbing background to the emergence of atomic energy included science fiction—a literature which had steadily stressed the horror of scientific power, the "death ray," the "mad scientist."

These, according to the Group, were some of the most serious obstacles in the way of establishing public confidence in the peaceful uses of atomic energy, and the background to the unreasonable fears aroused by this new source of power.

UNREASONABLE HOPES

Unreasonable hopes also affected people in both the developed and the underdeveloped countries, and they might lead not only to local dissatisfaction but also to a real danger for the whole world. Many people expected immediate returns from atomic energy in terms of prestige and amenities and a higher standard of living, for the first time putting poor countries on a par with the richest and most developed. They pressed urgently for these benefits, and were bound to be disappointed because new ways of life and many technical skills were needed before changes could be accomplished. The disparity between aspirations and results could well be catastrophic and lead to hostile attitudes. It was perhaps in this aspect that was to be found the greatest danger which could be anticipated from atomic energy, according to the Study Group.

IS THERE A MENTAL HEALTH PROBLEM?

The WHO Study Group found that in many countries and at many levels of society, and even among scientists, there was a feeling that there were no mental health, or even morale, aspects of atomic energy. This might in part be a sign of the general distaste for facing psychiatric problems, a distaste against which the mental health movement had had to struggle for years. But the experts felt that the avoidance and rejection of the subject was probably in itself a sign of anxiety, exemplifying that rational thought was sometimes blocked for emotional reasons. The Group feared

that this denial of the problem could lead to overconfidence and to further difficulties, and added that research into this matter was of urgent importance.

The Group found that every type of psychological reaction to atomic energy was met with—acute and marked fear or pooh-poohing of the whole situation, or making fun of it. But except for those who showed apathy—and this in itself might be an unhealthy sign—atomic energy never failed to make people react.

MENTAL HEALTH TASKS

The WHO experts felt that the complexity of underlying emotions in the changing environment of the second industrial revolution brought about by the atomic age needed to be recognized more widely among leaders of thought and action. The first task, they said, seemed to be to establish what might be termed a culture of change, in which change and reorientation could take place without upheaval. The chief effort would have to be directed towards securing for adults a greater intellectual grasp and thus a better understanding of the new situation. The Group felt, however, that the main duty of the present generation was towards its children. Their upbringing must enable them to put up with insecurity and to face reality. This upbringing must be free from anxiety and hate, producing in individuals self-reliance and a sense of responsibility towards others. And those who held responsible positions in public life—doctors, teachers, the clergy, the authorities—must be educated in mental health requirements.

As regards local action, the Group discussed a draft plan for the education of the community in matters pertaining to atomic energy. In essence, the idea is to form small teams consisting, for example, of a psychiatrist, a psychologist, a sociologist and a journalist. This team would study local conditions and contribute to the planning of new atomic enterprises and also to their acceptance by the people.

The Study Group also made a number of specific suggestions concerning research and work to be done in connection with mental health and atomic installations, the production of atomic power, and medical use of radiation.

As regards the press, the Group was impressed by the general standard of integrity with which journalists handled atomic energy news. Yet this news was often regrettably presented under scare headlines which contributed to the anxiety of the reading public. They felt that journalists could be educated to understand more of the implications of the news they had to handle and suggested that atomic authorities provide a really effective in-

formation service for their benefit.

In conclusion, the Group stated that its findings were in no way alarming. It was, however, convinced that they were concrete enough to warrant the attention of those in authority. The Group hoped that persons in authority would be prepared to accept its conclusion that the behavioral sciences could make a valuable and concrete contribution to the adaptation of mankind to the advent of atomic power, making it indeed as painless and harmless as possible and allowing man to reap a rich harvest from the seed his inventive genius had sown.

FORAND BILL NOT SUITABLE SOLUTION

The American Hospital Association has announced that "it believes that the Forand Bill (H. R. 9467) is not a suitable solution to the problem of financing the hospital needs of the aged."

The Association's stand was outlined in a statement on "Financing of the Hospital Needs of the Retired Aged" adopted recently by its Board of Trustees.

In explanation of its objections to the Forand Bill, the Association maintained:

(1) "Eligibility of aged beneficiaries is based on attainment of prescribed ages without regard to their employment status and thus invites a progressive reduction of these age levels with the ultimate possibility of a total program of government-financed hospital care."

(2) "The bill makes possible the provision of care for other than health reasons."

(3) "The bill provides inadequate safeguards against governmental interference with the actual operation of hospitals. Such interference would most likely hamper evolution of patterns of hospital service to the detriment of patient care."

The Association pointed out that in 1955 its House of Delegates adopted a policy calling for the use of federal and state matching grants to underwrite from general tax funds some of the cost of premiums for voluntary health insurance for the aged. Lack of support for this approach and the increasing problem of financing hospitalization for the aged resulted in continued study of the problem, culminating in the statement adopted by the Board of Trustees.

Pointing out the problem faced by retired aged people in financing their hospital care, the Association said that it believes that although "federal legislation will be necessary to solve the problem satisfactorily," it has "serious misgivings with respect to the use of compulsory health insurance for financing hospital care even for the retired aged."

Included in the statement was the suggestion that "all possible solutions must be vigorously explored, including methods by which the dangers inherent in the social security approach can be avoided."

The Association also said that it believes "that every realistic effort should first be made to meet these needs promptly through other mechanisms utilizing existing systems of voluntary prepayment." If this approach does not appear workable within the immediate future, "the use of social security to provide the mechanism to assist in the solution of the problems of financing hospital needs of the retired aged may be necessary ultimately."

RESIDENT LOAN FUND

AMERICAN COLLEGE OF CHEST PHYSICIANS

PURPOSE OF FUND:

To stimulate interest in postgraduate study of chest diseases, and to assist worthy postgraduate students in continuation of study in Diseases of the Chest (including diseases of the heart and lungs).

RULES AND REGULATIONS:

Eligibility: Any physician who has completed an internship of one year or more in an acceptable hospital may apply for a loan in order to continue study in the specialty of Chest Diseases. Such application shall be made on a form furnished by the American College of Chest Physicians.

Amount of Loan: The total amount of loan to any one student in any one year shall not exceed \$1,000.00. Except under special circumstances the loan shall be made on a monthly basis of \$80.00 per month for eleven months and \$120.00 on the 12th month. Not more than \$3,000.00 shall be loaned to any one student.

Repayment of Loan: For a period of not more than three years after the date of the first loan advance neither principal nor interest need be repaid on the loan provided the student shall continue his studies in postgraduate education in Diseases of the Chest. Should the student prior to this three year period engage in practice or discontinue his studies in Diseases of the Chest, he shall become obligated to make monthly payment on the loan of interest at the rate of 3% per annum, together with payment of principal in monthly installments in an amount of not less than 10% of the total loan during the first year and 20% during the second year and each year thereafter, provided, however, that the Resident Loan Fund Committee shall be authorized to modify this schedule both as to principal and interest when circumstances warrant. All monies repaid both as to interest and principal shall be returned to

the Resident Loan Fund.

Security: Each loan shall be secured by a note bearing simple interest at the rate of 3% per annum. There shall be provision in the note for repayment as previously specified. Additional security in the form of assignment of Life Insurance shall be obtained where possible and premiums for this may be paid by the Resident Loan Fund. Premiums shall be added to the loan and constitute an obligation of the borrower, drawing interest at 3% and considered as part of the loan.

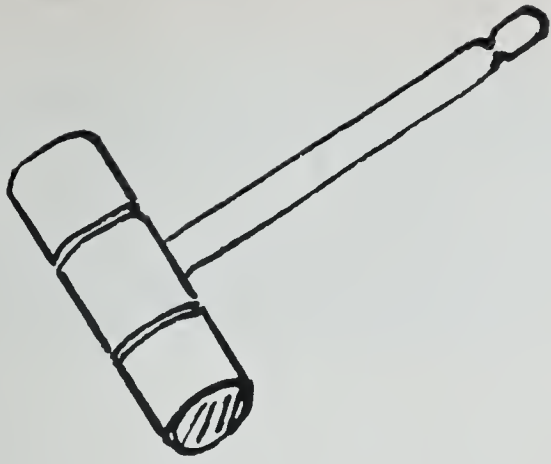
Jurisdiction Over Loans: The Resident Loan Fund Committee shall have absolute authority and full responsibility in selection of recipients of all loans, and shall have the responsibility of collecting repayments of loans and interest. All monies, however, shall be held in the Treasury of the College and such monies as are not required for loans shall be invested by the College. Any interest from such investments shall be added to the Resident Loan Fund.

Perpetuation of the Loan Fund: In order to serve the purpose of maximum usefulness, the fund should be increased annually. It is recommended that the Resident Loan Fund Committee be authorized by the Board of Regents to solicit donations from the Fellows and Members of the College for the fund; also from local, State and National Tuberculosis and Health Associations, Cancer Societies, and private lay persons and corporations, and from any other source. Such gifts should be made to the College and ear-marked for the Resident Loan Fund so that they may be tax exempt and deductible from Federal income tax.

It is also recommended that the College contribute to the fund each year until the fund is well established and adequate to meet the needs and demands of all eligible applicants.

AMA Prepares New TV Health Films—The American Medical Association announces that two new 10-minute films will be available about February 1 for use on local television and for showings to school and church groups. "The Silent Killer" deals with the dangers of carbon monoxide poisonings from gasoline exhausts. "Out of Step" tells the dramatic story of an accident which occurs to a child whose father has always ridiculed safety measures, first aid and other so-called "Boy Scout" ideas. The Scouts, of course, come to the rescue in the end!

Both of these black-and-white sound films are available on loan to medical societies, local television stations (with medical society approval), health departments, voluntary health agencies and schools. Only charge is for return shipping. These films were developed by the Bureau of Health Education and produced by the Marshall Organization. W. W. Bauer, M. D., Bureau director, serves as narrator.



President's Page



The Christmas season, which has just passed, is a period when great love and affection are shown towards other people throughout most of the civilized world. It commemorates the birth and life of Jesus Christ who is called the world's greatest physician and teacher. Unfortunately, the spirit of Christmas seems to be seasonal and too short-lived in our busy times.

Of all people outside of the clergy, the medical profession carries the teachings of Christ into its daily work probably more than any other group. There seems to be some of the missionary spirit in the heart of every physician. There is great satisfaction in rendering to the body and spirit. It is gratifying that this service is improving with each generation.

Teaching, the second of the great qualities of Christ, has also been a part of the work of every physician. Prevention of disease and maintenance of good health consume much of his time and effort.

A few days ago, on his 91st birthday, Dr. Charles Thigpen retired after 65 years of practice. Talking with him that day we discussed the changes which had occurred in medical practice during his lifetime. I was much impressed by his statement that the desires and philosophy which prompted him to study medicine were just as important in his thinking today as when he decided to study medicine. The role of the physician as both physician and teacher has changed little through the years, like the teachings of Christ.

There is great clamoring in our country now for more teaching in science. The future of our country seems to depend on how far we progress in the scientific field. I, for one, have never been impressed by the theory of "progressive education" and believe that our lag in scientific education is due to the educators themselves. Such teaching allows the teacher to escape responsibility and hard work as much as the student.

Since all branches of science are becoming more closely associated with the healing art, this may be the opportune moment for our Association to take on a new project of advancing scientific education in this state. Some work in this direction has already been done in Jefferson County through educational television. We now have more educational T. V. stations than any state and will soon have even more coverage. It is a medium of teaching which offers great possibilities. Our state Association has also been invited to participate in research and development of atomic energy in the southeast. I do not want it said that any part of the low economic or literacy standards in the South are due to negligence of the medical profession. This is a new year and we should look towards new horizons.



ORGANIZATION SECTION

REPORT OF THE COMMITTEE ON PUBLIC RELATIONS

At its meeting on December 15 the Committee on Public Relations reviewed the Suggested Guides to Relationships Between Medical Societies and Voluntary Health Agencies as outlined by the American Medical Association. The outline is printed below for guidance of local societies and individual physicians.

SUGGESTED GUIDES TO RELATIONSHIPS BETWEEN MEDICAL SOCIETIES AND VOLUNTARY HEALTH AGENCIES

Voluntary health agencies are an American institution, developed within the past half century. At the local, state and national level agencies devoted wholly or in part to health promotion are now numbered in the hundreds.

Physicians and medical societies are expected by the public to support these many voluntary efforts for the promotion of health. Each agency strives for medical approval and wants to count physicians among its members.

These guides are designed primarily for local medical societies; however, there are certain large national voluntary health agencies which have extensive national research obligations, and it may be difficult to evaluate them solely with local information.

Nature of Voluntary Health Agencies

Agencies concerned with health vary widely in organization, objectives, means for attaining objectives, fund raising methods, membership, and relationship of groups at local, state, and national levels. However, even with these variations, their likenesses are more notable than their differences. The principal characteristics of a voluntary health agency are:

1. A voluntary nongovernmental association of citizens; with
2. A common goal or interest, usually the prevention and control of some disease or infirmity; which
3. Gathers voluntary contributions, gifts, memorials and memberships; and
4. Expends its resources in ways decided by its own governing body, most often for public and professional education, medical and basic science research, and medical care; and which

5. May begin new fields of work or develop new administrative procedure to meet recognized needs.

Community agencies interested in health, including the voluntary health agency, can be classified into the following types:

1. The local subsidiaries of national health agencies concerned with a single disease condition which use their funds primarily for health education of the public, professional education, research, and, in some instances, medical care. Examples of such organizations are the National Tuberculosis Association, the American Cancer Society, and the National Foundation for Infantile Paralysis.
2. The local subsidiaries of national health agencies concerned with people having common problems resulting from a variety of related diseases. Among such agencies are the National Society for Crippled Children and Adults, and the National Association for Mental Health.
3. The local subsidiaries of national civic betterment organizations that become interested in specific short-term preventive medicine or medical care problems. Included would be civic organizations, such as Rotary, Lions, Kiwanis, the Chamber of Commerce, academic fraternities and sororities, and women's organizations.
4. Locally organized groups, often not affiliated with a national health agency, such as the auxiliary groups supporting local hospitals or clinics, infant welfare societies, and social agencies in such fields as family welfare, adoptive placements, family counseling and various youth activities.

The larger and better known national voluntary health agencies have now become an accepted part of our culture. Many of the smaller, more recently developed national health agencies are equally reliable and at least as valuable. However, even though these agencies have medical direction at the national and state level and are accepted by the medical associations at these levels, they are not so well known either to physicians or the public. An effort should be made to encourage further mutual understanding at the local

level so that medical direction may be available locally as well as nationally.

Voluntary Agency Evaluation

The medical society is dedicated to maintenance of health in the communities its members serve. It, therefore, has an interest in and an implied responsibility for citizen groups who profess a similar dedication. Any agency that conducts health education, research, and service for the prevention of disease and the rehabilitation of the crippled, therefore, becomes an object for medical society consideration.

The medical society approach to any agency should be friendly, since these agencies intend to promote health through support of sound medical practice. It should also be constructively critical, since occasionally uninformed enthusiasts can make mistakes which distort even well planned policy. The evaluation that a local medical society makes of a local voluntary agency should answer at least the following questions:

1. What relationship does the local voluntary health agency have to a similar state or national agency? Is it a subsidiary chapter, affiliate or independent unit?
2. Why was it started in this community? Who started it, and what interests are promoting it?
3. What are the purposes and stated objectives of the agency in reference to medical care and medical research?
4. Does the agency comply in its drive for memberships and contributions with the "Principles of Ethics of Fund Raising" formulated by the National Social Welfare Assembly?*
5. Is the fund goal realistic when related to community needs and the anticipated overall program of the agency at the local, state and national levels?***
6. Is the cost of fund raising and administration reasonable in relation to expenditures for the stated objectives?***
7. Are the educational and promotional materials medically correct, ethically presented, educationally sound, and in good taste?
8. Can the expenditures allocated for research be justified by morbidity and mortality incidence and by local, state and national research needs?

*National Social Welfare Assembly, Inc., 345 East 46th Street, New York 17, New York

**Information with regard to the quality of an organization and the propriety of its accounting procedures may be obtained through the National Information Bureau, 250 East 42nd Street, New York City.

9. How are expenditures for service related to needs for such service and to the established patterns for medical care?

Mutual Obligations Between Medical Societies and Voluntary Health Agencies

The medical society and the voluntary health agency adhere to universally accepted moral and ethical practices in performing their work. Since each is engaged in community health protection, the recognition of mutual obligations and the promotion of mutual understanding is imperative.

Among such mutual obligations are the following:

1. Liaison should be arranged between medical societies and health agencies by the selection of physician members of the agencies' governing bodies from physicians suggested by, or known to be acceptable to, the medical society.
2. The medical society and the health agency should jointly establish basic policies regarding medical care, preventive medicine and all matters involving physicians and their relations to the agency, its members, and its clients.
3. There should be cooperative program planning in terms of local, state and national needs and joint evaluation of accomplishments.
4. An agency should comply with the "Principles of Ethics of Fund Raising" formulated by the National Social Welfare Assembly and be willing to have its accounting procedures audited by appropriate auditors in order to establish confidence in its financial integrity.
5. There should be mutual exchange of information and opinion so as to permit the medical society and the agency to understand and accept each other's policy and practice.

The Role of Physicians in Relation to Voluntary Health Agencies

The individual physician plays four separate but related roles when he becomes affiliated with a voluntary health agency or some other voluntary organization concerned with a phase of preventive medicine or medical care.

1. He may be delegated as an official representative of his medical association, in which case he acts for the medical society expressing the consensus of his colleagues.
2. He may be called on by an agency to serve it as a physician in ways suggested by his specific professional interest.
3. He may seek membership on his own accord and become active in an agency's program

because of his own interests.

4. He may use a health agency as the medium for public service as a private citizen interested in his community, and regardless of his profession.

The obligations of these roles are quite different. Both the physician and the voluntary health agency he is serving must recognize the particular role being played. A physician selected by a voluntary agency to serve on its board serves as an individual. He may know medical society policy but has no authority to speak for the medical society unless granted that authority by action of the medical society. Physician membership on a board of directors is desirable and is to be encouraged even though such members represent the medical society only in an informal way and not as its official spokesman.

All voluntary health agencies depend on the contributed time of volunteer workers interested in promoting the agency's objectives as well as on memberships and voluntary contributions. Since the community looks to physicians for endorsement of a health agency, the physician is obligated to speak well of an agency whenever possible. He also will feel obligated to support with time and money those agencies in which he has personal interest.

Summary

1. The voluntary health agency is now a recognized community function, and most agencies merit medical society support of their objectives though the medical society, in some instances, might press for changes in policy or procedures.
2. Medical societies and voluntary health agencies have mutual obligations. Medical societies should participate and when desired give agencies advice and counsel on the medical and civic aspects of community needs. Voluntary health agencies should establish liaison with the medical society and frame their programs to conform to sound medical practice.
3. Physicians should support voluntary health agencies within their sphere of interest, and recognize whether their role is as official representative of the medical society, interested physician, or private citizen.

The above suggested guides were a part of the report to the House of Delegates by the Committee on Relationships Between Medicine and Allied Health Agencies of the A. M. A. It was referred to the Committee on Miscellaneous Business, recommended for approval by the committee, and approved by the House of Delegates.

New Council Now Screening Foreign Medical Graduates—After nearly three years of planning, the Educational Council for Foreign Medical Graduates has placed

an "open for business" sign on the door of its offices in suburban Evanston.

The council, which will carry out a detailed and comprehensive program for evaluating foreign medical school graduates, has offices in the Orrington hotel in Evanston. The executive director is Dr. Dean F. Smiley, Chicago, former secretary of the Association of American Medical Colleges.

It was decided three years ago that some form of evaluation service should be established within an independent agency whose affairs would be directed by a board of trustees designated by four cooperating organizations, the American Medical Association, the Association of American Medical Colleges, the American Hospital Association, and the Federation of State Medical Boards of the United States. For the next two years, the council will be supported by the four sponsoring agencies, the Kellogg Foundation, and the Rockefeller Foundation.

The council, incorporated in the state of Illinois, will be administered by a 10-member board of trustees—two representatives from each of the four sponsoring agencies and two persons representing the public at large, one named by the U. S. Department of Defense and the other by the U. S. Department of Health, Education and Welfare.

The president of the board is Dr. J. Murray Kinsman, dean of the University of Louisville School of Medicine.

Dr. Smiley said the council will distribute to foreign medical graduates around the world authentic information regarding the opportunities and difficulties involved in coming to the U. S. on an exchange student visa to take intern or resident training in a U. S. hospital, or coming on an immigrant visa with the hope of becoming licensed to practice.

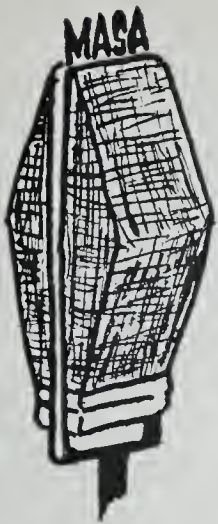
The council will make available to properly qualified foreign medical graduates, while still in their own country, all information on how to obtain certification. This involves a three-way screening process:

1. The council will certify that a student's educational credentials have been checked and found meeting minimal standards—18 years of formal education, including at least four years in a bona fide medical school, but excluding hospital training.
2. The council will certify that the command of English has been tested and found adequate for assuming an internship in an American hospital.
3. The council will certify that the general knowledge of medicine, as evidenced by passing of the American Medical Qualification Examination, is adequate for assuming an internship in an American hospital.

The council also will provide hospitals, state licensing boards, and specialty boards which the foreign medical graduates designate with the results of the three-way screening. It also will accumulate and publish each year complete data regarding the numbers and placement of foreign medical graduates in this country.

Dr. Smiley emphasized that the council will not serve as a placement agency either for interns or residents; it will not attempt to evaluate the teaching program or inspect or approve any foreign medical school, and it will not act as an intercessor for foreign medical graduates having problems under discussion by state boards of medical licensure or specialty boards.

Dr. Smiley said that tentative plans call for the first American Medical Qualification Examination for foreign medical graduates already in this country to be held in either February or March 1958, and that the second such examination for foreign medical graduates both here and abroad will be held in either July or August.



ASSOCIATION FORUM

HEALTH AND THE SEXES

(From *Progress in Health Services*, a publication of Health Information Foundation)

Women in the United States today live considerably longer, on the average, than men. In 1956, for example, the life expectancy of females at birth was over six years higher. In addition, the age-adjusted* mortality rate for males, 9.6 per 1,000 population, exceeded the corresponding rate for females by well over 50 per cent.

This better record of women results from the more rapid decline of their mortality since 1900, rather than from any increase in the death rate among men. While the male death rate dropped

from 1900 to 1956 by almost one-half, the corresponding decline for females was much larger—just under two-thirds. The mortality differential between the sexes is now wider than at any time in the history of this country.

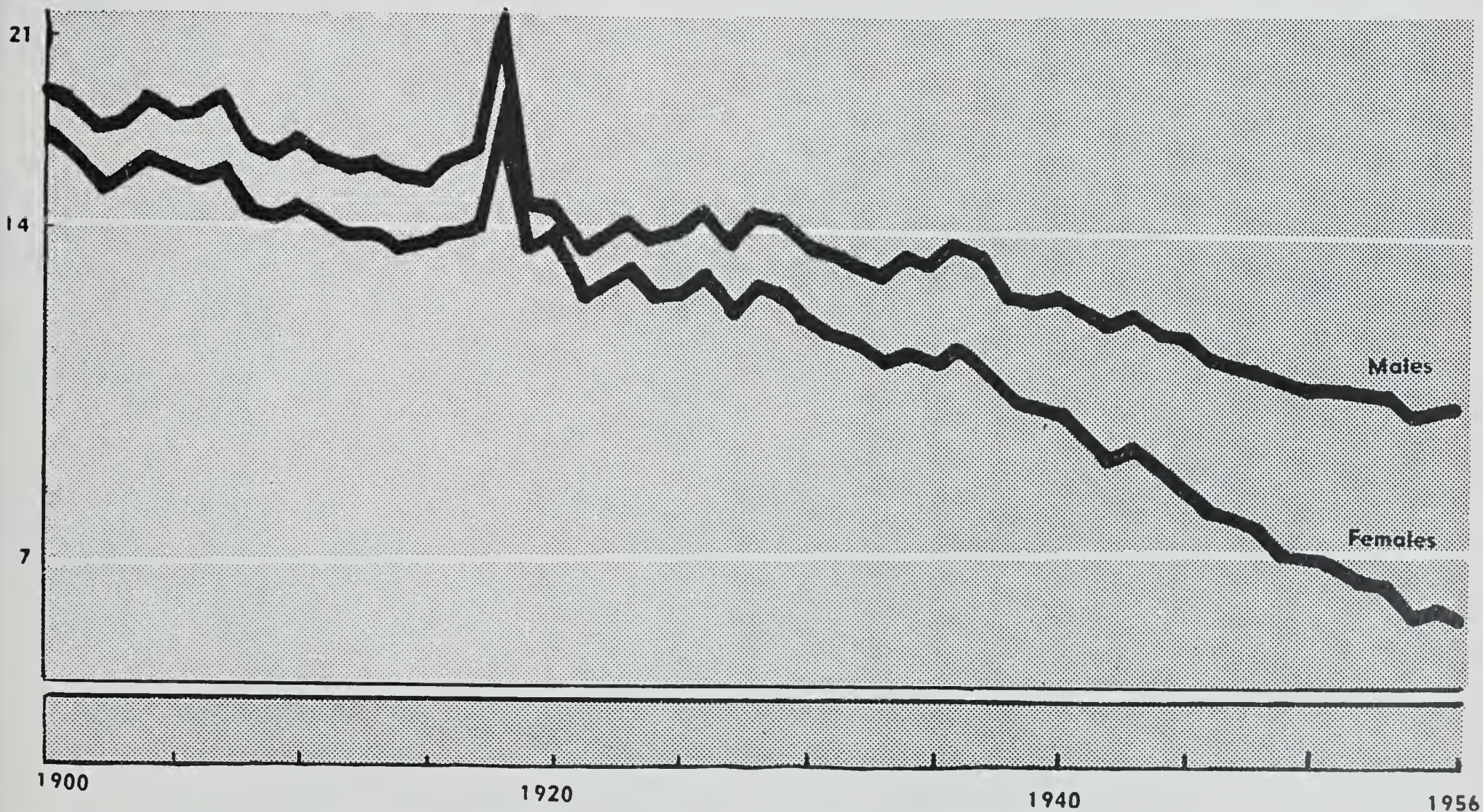
In 1900 the age-adjusted death rate for females stood at 17.0, while the corresponding rate for males, 18.6, was about 10 per cent higher. As the mortality for both sexes declined with time, the gap widened somewhat (see Chart I), only to narrow again immediately after the great influenza epidemic of 1918. Thereafter the long-term decline in mortality resumed, with women once again benefiting more from medical progress.

In 1956 there were 228,000 excess male deaths in this country—896,500 deaths among males com-

CHART I

MORTALITY BY SEX, UNITED STATES,* 1900-1956

Deaths per
1 000 population †



*Death-registration states only, 1900-1932. In 1900 these consisted of ten states and the District of Columbia.

†Adjusted to 1940 standard.

Source: Various reports by the National Office of Vital Statistics.

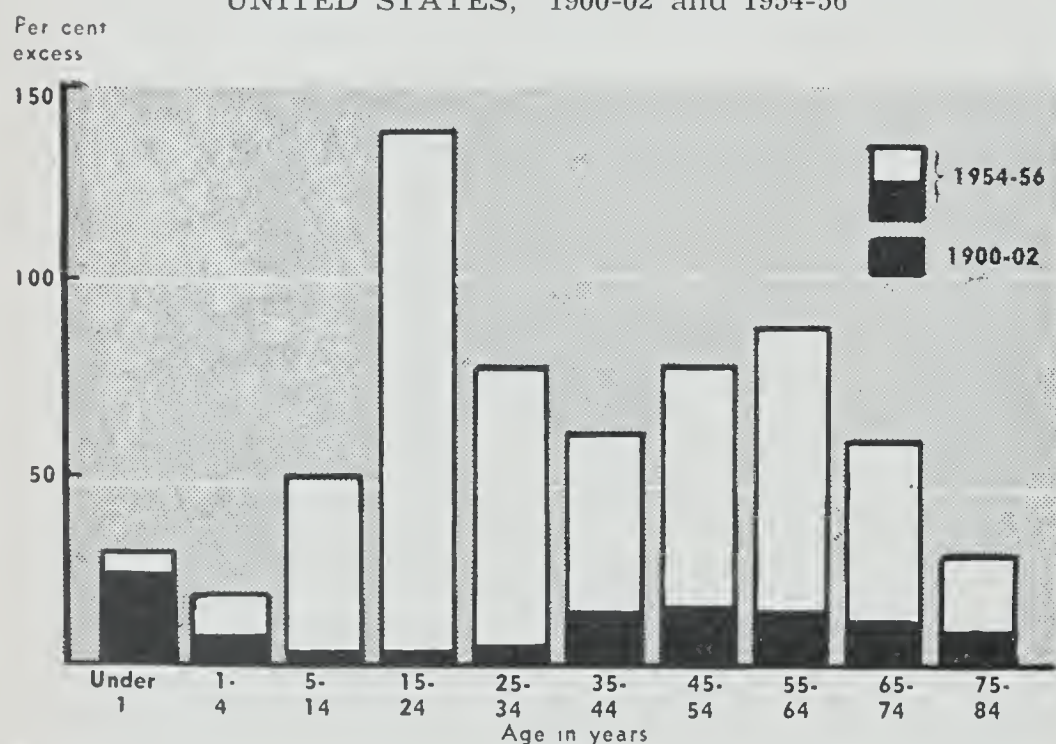
pared to 668,500 among females, according to preliminary estimates by the National Office of Vital Statistics. The annual differential has numbered over 100,000 since well before 1933 and over 200,000 since 1950. The excess would currently be even greater except that today many more women than men are alive at the older ages, when the mortality risk is greatest.

The extent to which females have benefited more than males from mortality decline varies widely by age. Even at the turn of the century males had a less favorable record than females at all ages, but the margin was not large throughout much of the life span (see Chart II). The excess was highest among infants—almost one-fourth; and at ages 35-64—about one-seventh.

The differential has widened considerably since that time at all ages except infancy and at 85 and over. (At these oldest ages there has even been a slight narrowing of the margin.) Currently, male mortality exceeds female by 140 per cent at ages 15-24, where the margin was formerly narrowest, and by 87 per cent at 55-64.

CHART II
EXCESS MORTALITY OF MALES OVER FEMALES
BY AGE

UNITED STATES,* 1900-02 and 1954-56



*Death-registration states only, 1900-02. In 1900 these consisted of ten states and the District of Columbia. Comparisons are based on averages of annual mortality rates.

Source: Same as Chart I.

DISEASE PATTERN CHANGES

Excess male mortality is characteristic of nearly all leading diseases; but the widening of the differential has, to a considerable extent, been associated with a shift in the leading causes of death, from the communicable diseases at the turn of the century to the degenerative diseases today.

In 1900 pneumonia and influenza, tuberculosis, and diarrhea and enteritis—three of the five leading causes of death, accounting for nearly a third of the total—resulted in excess male mortality of only 2, 9, and 9 per cent, respectively (see Chart

III). By 1955 the importance of these diseases had declined; although their excess male mortality had risen sharply in the interim, their effect on the sex ratio for all deaths was almost negligible.

Heart disease in 1900 caused an excess male mortality of only 11 per cent. But after 1920 the differential rose steadily, reaching 78 per cent by 1955. This rise was associated with a decline in the infectious and rheumatic forms of the disease, and a corresponding increase in arteriosclerotic heart disease, especially diseases of the coronary arteries. Male mortality from heart disease is currently more than twice the female rate over the entire age range 35-64.

Because of the importance of heart disease in today's mortality picture (nearly 40 per cent of all deaths in 1956 were ascribed to this cause) a considerable proportion of the current excess of male deaths is accounted for by this disease alone. It causes more than half the total disparity at ages 40-74; thereafter the proportion declines, and is just under one-sixth at 85 and over.

At the upper ages, in addition to heart disease, malignant neoplasms (cancer) account for a sizable proportion of the excess male deaths. Cancer was a relatively minor factor in the mortality picture around 1900, causing about 4 per cent of all deaths. At that time female deaths from this disease exceeded male by 65 per cent. By 1955 cancer accounted for 16 per cent of all deaths, and there was an excess *male* mortality of 20 per cent.

The male death rate from cancer currently exceeds the female rate from birth through the ages of 25-29 and at 55 and over. After the early twenties, a large proportion of fatal malignancies involve the female breast and genitals.

At the older ages, the digestive system is the most common site, accounting for over 40 per cent of all cancer deaths. Males are most vulnerable, with their toll exceeding that of females by about 50 per cent at ages 60-74. The largest male excess in cancer mortality involves the respiratory system; the number of such deaths has increased spectacularly in recent years.

MALE ACCIDENT TOLL HIGH

By far the highest excess of male deaths among the leading causes, especially at the younger ages, occurs among accidents. This cause alone accounts for over four-fifths of the excess male toll from all causes of death at ages 10-24, and nearly three-fourths at 25-34. The male excess is greatest—over 500 per cent—at 20-24. (Nevertheless, even if accidents could be eliminated as a cause of death, the excess male mortality would still be considerable.)

Accidents are unique among the leading causes

of death in that the relative excess of male deaths, although still far larger than among the diseases, has declined since 1900. Much of this is due to the drop in importance of fatal work accidents, which take males lives almost exclusively.

Even before birth there is a pronounced difference between the sexes in the ability to survive. The fetal death (stillbirth) rate for males is 12 per cent higher than for females. The disparity rises to almost 30 per cent in the rate for deaths occurring within 24 hours after birth.

Prior to the present era of medical progress, maternal mortality was so high—about 20,000 in 1900* in the United States—that it represented a significant counterweight to excess male mortality. In addition, women often experienced the effects of childbirth years later in severe illness and impaired vitality, particularly when large families were the rule rather than the exception. But within recent years, maternal mortality has declined to such low levels—just under 1,600 in 1956—that it no longer represents a significant aspect of the problem.

Diabetes mellitus is the only major disease that has a higher age-adjusted mortality rate for women than men. The death rate from this disease, for reasons that continue to remain obscure, is over 35 per cent higher for females than males. Nevertheless, this has little effect on the total mor-

tality situation, since in 1956 less than 2 per cent of all deaths were ascribed to this specific cause.

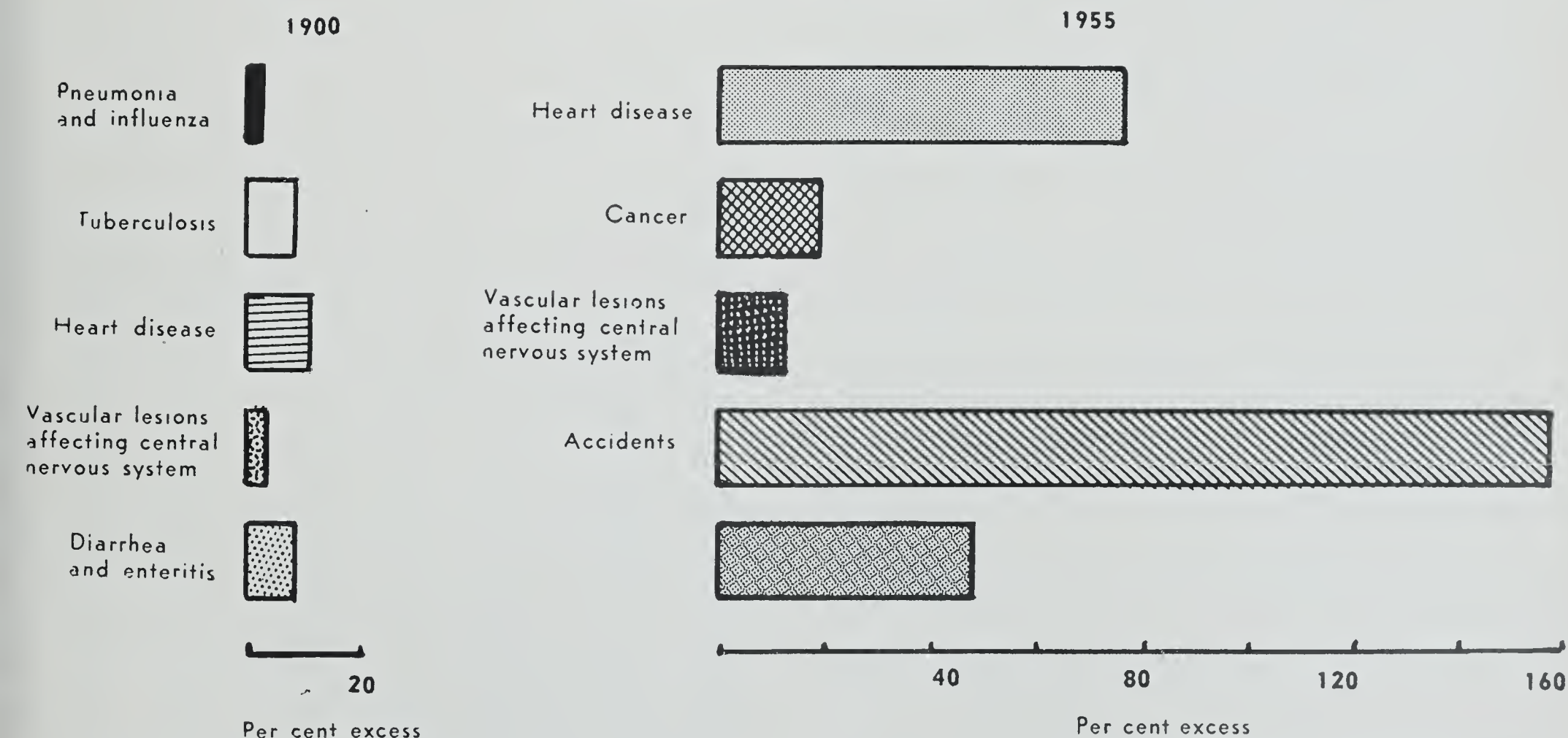
The sex difference in mortality now exists among all sectors of the population, although often in unequal degree. For example, among nonwhites, widening in the sex differential has lagged some years behind the rest of the population, although the general trend has been in the same direction. In 1956 the death rate for nonwhite males exceeded that for nonwhite females by 30 per cent, compared to a gap of over 60 per cent among whites. The shift from the communicable to the degenerative diseases as leading causes of death has been less widespread among nonwhites than among the total population.

Also, the larger the city, the wider is the differential mortality of its residents by sex. Thus, in a recent study* of mortality in New York State exclusive of New York City in 1949-51, the excess of male over female mortality within metropolitan areas varied from 39 per cent in central cities (population 50,000 and over) to 33 in other cities of 10,000 and over and 29 in places of under 10,000. Similarly, outside metropolitan areas, the percentages were 37 in places of 10,000 and over and 29 in places of under 10,000.

Social and economic class (based on occupation)

*Data adapted from E. Parkhurst, "Differential Mortality in New York State, Exclusive of New York City, by Sex, Age, and Cause of Death, According to Degree of Urbanization," *American Journal of Public Health*, 46, 8: 959-965 (August) 1956.

CHART III
EXCESS MORTALITY OF MALES OVER FEMALES AMONG
THE FIVE LEADING CAUSES OF DEATH
UNITED STATES, 1900 AND 1955*



*All rates adjusted to 1940 standard. For 1900, these applied to the death-registration states only, consisting of 10 states and the District of Columbia.
Source: Same as Chart I.

Health Information Foundation

is also associated with the magnitude of the sex ratio of mortality. In one study,* excess male mortality in England and Wales was higher between men and wives of men in professional and intermediate occupations, and lower for skilled, partly skilled, and unskilled occupations.

MORBIDITY DIFFERENCES

The situation is quite different, and considerably more complex, with regard to illness. Women report themselves as ill more often than do men. Thus, in a series of periodic household surveys** of the white population by the United States Public Health Service, females reported 1,112 annual cases of illness (excluding female genital and puerperal causes) per 1,000 population, 20 per cent more than the 927 reported for males.

For disabling illness, i. e., illness in which the patient is unable to conduct usual activities for one day or longer, and for bed cases, the situation was essentially similar: Higher rates were reported for females of 14 and 20 per cent, respectively. The excess of cases of chronic illness among females was particularly large—54 per cent.

By age, the frequency of reported illness was higher among females at all ages past 10, with the highest excess, 60 per cent, at 45-54. These higher female rates spanned almost the entire range of diagnostic categories of illness.

Along with these higher morbidity rates, a study in Washington State in 1953 showed that women consulted physicians in private practice more often than did men, even omitting visits for purposes of health supervision or those connected with childbirth or conditions peculiar to the female sex.† Female visits exceeded those of males by 4 per cent, and this excess would have reached 10 per cent if there had been as many women as men in the population of that state. On the other hand, more U. S. males than females were hospital patients in 1953.‡

The exact implications of these studies are not yet clear. For one thing, household surveys of illness are subject to various biases, including both under- and over-reporting, that may be selective for sex. Women, the chief respondents in these surveys, may be aware of, or remember, their own illnesses better than those of the men in their households. At the same time, economic and so-

cial pressure is undoubtedly greater on the breadwinners of the family—chiefly men—to ignore all but the most serious or disabling symptoms.

Studies of physicians in private practice omit a large segment of the physician population—for example, those associated with the Veterans Administration, where men constitute a large majority of patients. And a census of hospital patients at a given time presents at best an incomplete picture, even of hospitalized morbidity, unless it includes data on admission rates and length of hospital stay. These are presently unavailable on a nation-wide basis in the detail required.

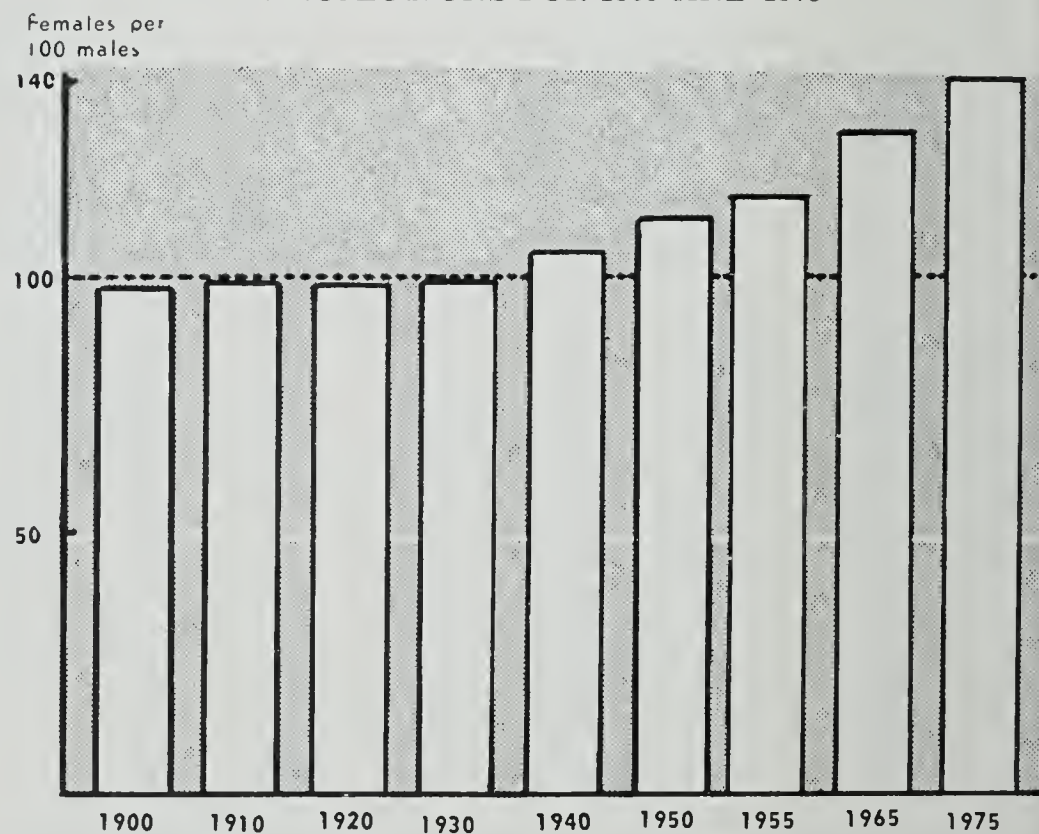
LONG-TERM TRENDS

The sex differential in mortality has left its mark on the population structure. In the early years of the century, men enjoyed numerical ascendancy in this country in nearly all age groups. This situation resulted from the heavy influx of immigrants, among whom a sizable majority were males, as well as from the normal 5 to 6 per cent annual excess of male births.

When immigration diminished, however, while the annual excess of male deaths grew even larger, the male population majority decreased and soon became a minority. Currently women outnumber men at all ages past the mid-twenties.

The excess is particularly large—over a million in 1956 and increasing steadily—among persons aged 65 and over. By 1975, if present trends continue, this excess will have risen to 3¼ million; women will outnumber men by 138 to 100 (see Chart IV). Even at midlife—45-64—women will exceed men by 2.2 million, or 11 per cent.

CHART IV
SEX RATIO OF PERSONS AGED 65 AND OVER
UNITED STATES, 1900-1955 AND
PROJECTIONS FOR 1965 AND 1975



Source: Various reports and projections by the Bureau of the Census.

*Adapted from The Registrar General's Decennial Supplement, England and Wales, 1951, "Occupational Mortality, Part I," London, 1954.

**S. D. Collins et al., "Sickness Experience in Selected Areas of the United States," Public Health Monograph No. 25, Washington, D. C., 1955. These studies extended from the 1920s through the 1940s.

†Data adapted from S. Standish, Jr., et al., Why Patients See Doctors, University of Washington Press, Seattle, 1955.

‡F. G. Dickinson, "Age and Sex Distribution of Hospital Patients," Bulletin 97, Bureau of Medical Economic Research, American Medical Association, Chicago, 1955.

Excess male mortality is by no means peculiar to the United States. Rather, it is common, with only minor exceptions, throughout much of the world. In general, the differential is greatest where life expectancy is highest, and widens as each country's mortality rate declines.*

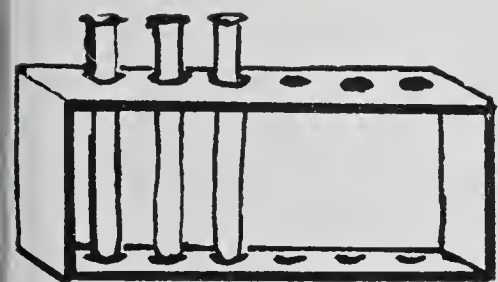
Research currently seeks to determine whether the sex differential in mortality is due to biological or social (including environmental) factors. It is difficult to imagine that the disparity during the prenatal and neonatal periods, infancy, and even early childhood can be the result of social factors, since the environment of the sexes differs not at all or little during this period. Even during adulthood, Madigan** has made a strong case for biological causation by demonstrating significant differentials in the mortality experiences of men and women subject to almost identical en-

vironments. Implied is a greater constitutional resistance to degenerative disease on the part of women, which benefits them increasingly as the communicable diseases and hazards of maternity come under tighter control.

Nevertheless, the social environment unquestionably has a significant role in causing excess male mortality, especially from accidents. Also, the higher mortality differentials by sex in the larger cities and in the upper occupational groups suggest that certain modes of living may place an unequal stress on males. Perhaps men more than women are subject to internal stress, with a consequent higher incidence of coronary artery disease and ulcers. Exercise or the lack of it, smoking, changing dietary habits, the propensity of women to take greater advantage of medical facilities—all these have been suggested as possibly related factors. But whatever the reasons, it would be well to concentrate medical research upon this problem before American males—especially those at age 45 and beyond—become in effect an underprivileged segment of the population.

*United Nations, "Age and Sex Patterns of Mortality," Population Studies No. 22, 1955.

**F. C. Madigan, "Are Sex Mortality Differentials Biologically Caused?" The Milbank Memorial Fund Quarterly, XXXV, 2: 202-223 (April) 1957.



STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.

State Health Officer

THE BATTLE FOR SAFE, PURE FOOD AND DRUGS

The housewife who goes to the corner grocery store or the one who buys the family's food supply at the supermarket can both be sure of one thing. The food they purchase is pure. It is not adulterated. If it is canned, it has been prepared and processed according to certain standards which insure the food's safety for human consumption. The same thing that is true of food is true of the medicines you buy from the neighborhood drug store or the downtown pharmacy.

This is the situation today, but food and drugs have not always been as safe. In the early 1900's, the patent medicine trade was at its height. The "medicine" man hawked his wares from door to door, from town to town. But few if any steps were taken to check up on these so-called drugs, to see if they perhaps contained ingredients that might be harmful to the consumer. The "medicine" man went his way unhindered, and so he not only could but often did sell unsuspecting buyers products that caused serious damage when

consumed. Moreover, conceivably any cannery owner could run his business the way he saw fit, even if that meant placing the lives of food consumers in danger. This not only could but undoubtedly did happen because the necessary sanitary and other precautions were woefully neglected in some cases.

Now, you may ask, why do people in Alabama and elsewhere in the United States today have purer food and drugs than they did 60 years ago? There are perhaps several reasons. For one thing, a growing number of individuals became aware of the necessity for some means to insure the safety of such products. Public health was fast coming to be a reality in many towns and cities for the first time in an organized way. And if water supplies should be sanitary and protected, why shouldn't the same or similar rules apply to food and drugs?

Thus, it is generally accepted nowadays that these essential products must be safety-tested if the public's health is to be served. And one means to that end was the establishment and operation of the Food and Drug Administration. There are, of course, other ways and means to achieve the food and drug safety goal today. Both the Alabama

State Health Department and the various county health departments pursue programs to promote the public's well-being in this area. Also, the American Medical Association is particularly active in the field of drug testing. The Association's Council on Drugs is concerned not only with the safety of drugs but also with their potential in medical treatment.

However, the Food and Drug Administration, a national agency, was in the forefront of products safety. Glen C. Weber, the author of an article in a recent issue of *The Monthly Bulletin* (published by the Indiana State Board of Health) states that there is one particular date that every student of public health should know. This author might have gone a step farther, and pointed to this date's importance not only for public health students but for all Americans. For the date he referred to was June 30, 1906. And that was the day that President Theodore Roosevelt signed the Pure Food and Drug Act which created the Food and Drug Administration.

In the years since, more and more people have come to appreciate the vital work this agency does. And this awareness has resulted from time to time in various and generous names and titles of praise. Some have called it a public health "watchdog." And an issue of *Medical News* (published by a leading drug company) terms the agency "a bulwark against medical quackery." This latter title, of course, refers primarily to the agency's work to safeguard the content of drugs placed on the market.

The Food and Drug Administration's birth date, then, was June 30, 1906. But was the idea for such an organization suddenly the product of someone's imagination in that year? Indeed not. As a matter of fact, many interested people had been trying to have legislation for such work passed for more than 50 years. Moreover, some quarter of a century earlier, real action toward such a goal was set in motion. And for almost 20 years before 1906, the outline for the way such an agency would operate had been developed!

A great many individuals, of course, were working all or much of this time to make some sort of food and drug "watchdog" a reality. But one man is given a great deal of the credit for organizing the efforts in this direction. The author of that Indiana health publication article we mentioned earlier tells us that Dr. Harvey W. Wiley was the crystallizing force, the "man of vision, stature and energy. . ." who was at the head of this progressive movement.

Who was this man, and how did he become interested in this work so vital to so many others? Perhaps you would like to know more about him.

A small village named Kent in Indiana was Harvey Washington Wiley's birthplace in 1844. His parents were pioneer farmers, but his father was a teacher, also, at a nearby school, and Wiley's formal education was not neglected.

His life as a youngster was probably not too different from that of other young men in similar circumstances. During some of the time he did not spend studying, he worked on the family farm. And by the time he was 18 years old, he entered the local college's beginning class.

His college career was to be interrupted for a short time for service in the army, but he returned to his studies and was graduated from college a few years later.

Still in Indiana, he took a job teaching school. A short time later, we find Harvey W. Wiley studying medicine with a physician in Kentucky. His more formal medical training began in 1868, when he enrolled at the newly established Indiana Medical College at Indianapolis. At the same time he was employed to teach Latin and Greek at a preparatory school nearby.

Three years later, in 1871, the teacher-student was awarded his Doctor of Medicine degree. He was now Dr. Harvey W. Wiley. But rather than establishing a private medical practice, Dr. Wiley turned again to teaching. He was at the same time an instructor in science at an Indianapolis high school, and professor of chemistry at Indiana Medical College. However, he felt the need for additional training, especially for his position as chemistry professor. So off he went to Harvard College, where, in less than a year, he had still another degree to his credit—that of Bachelor of Science.

The next years back in Indianapolis were busy ones for Dr. Wiley. He had no less than three teaching posts. During the morning hours, he taught chemistry at a preparatory school. His afternoons were taken up with high school classes in physiology, and if this were not a heavy enough schedule already, he spent his evenings lecturing on chemistry at the medical college!

Needless to say, this was a strenuous schedule for any man, even one with Dr. Wiley's obvious extraordinary energy. This is one of the reasons given for the "break" in his health. He had an attack of cerebrospinal meningitis, and his life was endangered by this illness.

Fortunately, however, he recovered, and the number of his teaching jobs was down from three to two. He continued lecturing at the medical college, and at the same time became professor of chemistry at Purdue University. By reason of his position at Purdue, he also served as state chemist for Indiana. During the nine years he

remained at the university, he established what were among if not the first chemical laboratories in the nation.

Somehow during his busy earlier life, Dr. Wiley had managed to travel in Europe, and while there, he had studied under some eminent scientists in his field. One of these was a Dr. Sell, who was at the time chemist of the Imperial Health Office at Berlin.

Up to this point in his career, there is little doubt that chemistry was Dr. Wiley's specialty. However, a specialty within this specialty begins to emerge. Mr. Weber, the author we referred to earlier, who is the director of Indiana's Food and Drug Laboratory, tells us that gradually Dr. Wiley's interests turned to the chemistry and science of nutrition. He was concerned as well with the problem of food adulteration. This interest was to be his life's work, and he began this work in 1883, at the age of 39.

In the spring of that year he was named chief of the division of chemistry of the United States Department of Agriculture. Mr. Weber, that health official of Dr. Wiley's native state, tells us that:

"Harvey W. Wiley dedicated himself to the task of analyzing, reporting, exhorting, and trying by all possible means to bring about passage of a law which would insure the purity of the food and drugs sold to the people of the nation. . . ."

Because, after many years of hard work, he was successful, we today have a memorable 1906 public health date to remember and be grateful for. For six years after the passage of the Pure Food and Drug Act, Dr. Wiley worked hard at setting up and operating the method of enforcement of the Act—the Food and Drug Administration.

Again referring to Mr. Weber, we find that "Harvey Wiley labored in a field where the results are neither suddenly apparent nor obviously spectacular. We might call it 'Preventive Public Health.' He was faced not only with working out a solution to a problem, but also with making people understand that there was a problem. . . ."

Dr. Wiley, it is said, actually helped draft the Pure Food and Drug Act. And it was obviously well-prepared and inclusive, for very few changes, relatively speaking, have been necessary since that time. Dr. Wiley and this legislation were particularly outspoken on the subject of dangerous chemical preservatives in food, and the Food and Drug Administration still is on guard against such hazards.

Today this agency is responsible for the purity of products worth more than \$60 billion a year, which happens to be at least 10 times the size of this agency's budget of operating monies. To

get an idea of the work of this "watchdog" agency, their records show that close to a hundred tons of spoiled or harmful products were taken off the market during every week of a recent year.

Early in 1956, the Food and Drug Administration warned against a particular cancer "medicine" which was termed worthless, after being studied and examined. This is just one of perhaps thousands of examples why *Medical News* calls this agency a bulwark against medical quackery.

A common sight in a grocery store is a shopper perusing the label of a product before he or she buys. Much of the "small print" on that label may be there because the Food and Drug Administration thought it was important to include it. And the Food and Drug Administration means safe products for us today because one man, primarily, Dr. Harvey W. Wiley, thought this agency was important enough to work very hard for.

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director

SPECIMENS EXAMINED

November 1957

Examinations for diphtheria bacilli and Vincent's	170
Agglutination tests	473
Typhoid cultures (blood, feces and urine)	387
Brucella cultures	2
Examinations for malaria	37
Examinations for intestinal parasites	2,098
Darkfield examinations	3
Serologic tests for syphilis (blood and spinal fluid)	20,863
Examinations for gonococci	1,277
Examinations for tubercle bacilli	3,083
Examinations for Negri bodies (smears and animal inoculations)	171
Water examinations	1,998
Milk and dairy products examinations	4,082
Miscellaneous examinations	2,210

Total 36,854

AMA-AHA Joint Committee Studies Medicolegal Problems—A concerted educational program on medical professional liability is being formulated by a joint committee of the American Medical Association and the American Hospital Association. Among other things, the liaison committee plans to study current medicolegal advisory set-ups in a number of states, the liability of charitable and governmental hospitals, and ways of promoting postgraduate education in the professional liability field. Progress reports will be submitted to the boards of trustees of the two associations, and physicians and hospital personnel will be kept informed on all action taken through the organizations' official publications.

Representatives appointed from AMA include: Drs. Joseph F. Sadusk, Jr., Oakland, Calif., chairman; H. Close Hesseltine, Chicago, and William M. Nebeker, Salt Lake City. AHA representatives are: Ray E. Brown, Chicago; Dr. August H. Groeschel, New York, and James E. Ludlam, Los Angeles.

BUREAU OF PREVENTABLE DISEASES

W. H. Y. SMITH, M. D., Director

CURRENT MORBIDITY STATISTICS

1957

	Oct.	Nov.	E. E.* Nov.
Typhoid and paratyphoid.....	0	0	2
Undulant fever.....	3	0	2
Meningitis.....	6	12	10
Scarlet fever.....	408	615	77
Whooping cough.....	47	40	54
Diphtheria.....	12	11	45
Tetanus.....	4	1	4
Tuberculosis.....	159	196	171
Tularemia.....	2	0	1
Amebic dysentery.....	1	2	1
Malaria.....	0	0	3
Influenza.....	50,999	41,861	111
Smallpox.....	0	0	0
Measles.....	35	44	77
Poliomyelitis.....	4	9	15
Encephalitis.....	3	1	0
Chickenpox.....	6	37	67
Typhus fever.....	2	1	1
Mumps.....	25	76	53
Cancer.....	647	898	367
Pellagra.....	0	0	1
Pneumonia.....	146	581	139
Syphilis.....	81	76	233
Chancroid.....	3	7	7
Gonorrhea.....	211	249	332
Rabies—Human cases.....	0	0	0
Positive animal heads.....	10	12	0

* * *

	Nov.	Dec.	E. E.* Dec.
Typhoid and paratyphoid.....	0	3	3
Undulant fever.....	0	0	3
Meningitis.....	12	22	8
Scarlet fever.....	615	431	71
Whooping cough.....	40	23	31
Diphtheria.....	11	3	25
Tetanus.....	1	4	3
Tuberculosis.....	196	121	158
Tularemia.....	0	1	0
Amebic dysentery.....	2	1	1
Malaria.....	0	1	1
Influenza.....	41,861	4,373	252
Smallpox.....	0	0	6
Measles.....	44	60	146
Poliomyelitis.....	9	6	11
Encephalitis.....	1	1	0
Chickenpox.....	37	131	210
Typhus fever.....	1	0	1
Mumps.....	76	134	75
Cancer.....	898	440	402
Pellagra.....	0	0	0
Pneumonia.....	581	262	177
Syphilis.....	76	104	136
Chancroid.....	7	5	6
Gonorrhea.....	249	254	306
Rabies—Human cases.....	0	0	0
Positive animal heads.....	12	13	6

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

Wandering Patients Suffer From Unusual Syndrome—

Patients who travel from hospital to hospital faking startling symptoms to gain admission may have Munchausen's syndrome.

A case of the syndrome was outlined in the October 26 Journal of the American Medical Association by Dr. John S. Chapman of the State University of Iowa College of Medicine, Iowa City. He said his is the first reported American case, although the condition has been reported frequently in England.

In 1951 an English physician "somewhat facetiously" applied the term Munchausen's syndrome to "perennial peregrinating problem patients" because "their wide

travels and fanciful histories are reminiscent of the travels and adventures of fiction's Baron Munchausen," Dr. Chapman said.

Such patients are an economic threat and an extreme nuisance to the hospitals they visit. Publicizing their histories in medical journals, and thereby alerting the medical profession, seems the only way of coping with them, he said.

His patient was a 39-year-old merchant seaman and part-time professional wrestler who kept the medical wards of the State University of Iowa hospitals in a state of turmoil for 40 days in 1954, after he "burst into the hospital with blood spattered all over the front of his shirt."

He seemed to be coughing up blood and claimed to be in anguish from pain in the left side of his chest. He exhibited a number of surgical scars on the abdomen and had "an uncanny knowledge" of the location of his own veins. On examination both legs were red, hot, and swollen with distended veins, indicating thrombophlebitis. It was assumed he had suffered a pulmonary embolus.

He demanded drugs, diagnostic studies, and surgical treatment. Later he became increasingly uncooperative and disturbed, even to the point of ripping out surgical stitches. He was released from the hospital, only to return. Later he was sent to a mental institution, from which he eventually escaped.

A search of his wallet revealed he had been in a number of hospitals before reaching Iowa City. In fact, he had been in at least 16 hospitals between 1943 and 1954. After leaving Iowa City, he was traced through at least nine hospitals. Dr. Chapman learned through letters from these hospitals that the sailor followed much the same pattern in all of them. He left unpaid bills approximating \$2,000 at each of six or more hospitals.

It is Dr. Chapman's opinion that the patient's bleeding is faked and is produced by a variety of methods, although the hospital staff never learned just how he did it. None of his many diagnostic studies have demonstrated any abnormality to account for his chest pain or bleeding, Dr. Chapman said. It is possible that years ago he had a real pulmonary embolus and thus learned the symptoms which he now simulates.

Nevertheless, he is "now a professional hospital bum with a technique which guarantees him admission to any hospital at any time," Dr. Chapman said. "He seems to enjoy the consternation and stereotyped response evoked by his blood-spattered appearance. . . . He prefers large hospitals, and is especially fond of university centers. He expectorates blood in spectacular fashion. He plays upon the sympathies of the interns and residents. . . . He blusters but never actually harms anyone. He submits to all diagnostic procedures after much argument and persuasion. . . . He demands and gets attention, time, and drugs."

This patient's behavior is characteristic of patients with Munchausen's syndrome. Just why they behave as they do is obscure, although a number of possible reasons have been suggested, Dr. Chapman said.

They may get "pathological enjoyment from the dramatic role of the patient." They may harbor a grudge against the medical profession and resort to this method to get even, but if so, "they must also have an innate trust of doctors, for they allow surgical operations and other dangerous procedures to be performed," Dr. Chapman said.

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DERMATOLOGIC MANIFESTATIONS OF INTERNAL DISEASE

R. L. BRIER, M. D.

Mobile, Alabama

Skin conditions may occur independently of or associated with systemic involvement. Just as clubfoot may involve the skeletal system or hypospadias involve the genitourinary system, ichthyosis may involve only the skin. However, many conditions that involve the skin may also involve the whole organism. The skin often serves as a mirror which reflects what is going on in the entire body. The problem and mystery lie in having the ability to interpret what you see in the mirror. Frequently this requires a Sherlock Holmes talent in being able to interpret and put together the small bits of evidence. To solve this mystery and to fit the pieces of the puzzle together is a most interesting and intriguing work. For example, is it an innocent pityriasis rosea, which runs a self-limited harmless course of six to eight weeks, or is it a secondary syphilis which, if untreated, may result in grave consequences to the patient himself and to the community since it is a contagious disease?

Let us now differentiate between the two. With pityriasis rosea the eruption often begins with a mother or herald patch which is about one and one-half inches in diameter and which is followed with a more generalized rash from two days to a week later. The lesions begin as groups of small red maculopapules which are round and ovoid in configuration and are arranged in the lines of cleavage. The eruption usually assumes the so-called "winter underwear" distribution, being present on the trunk, arms and thighs; however, in children the face and scalp may also be involved. A fine scale rapidly develops and resembles a wrinkled cigarette paper. The lesions are pruritic in most instances, and there occurs a partial clearing in the center and thus resembles ringworm. The red color fades into a pink and then a tan hue which is often not visible in a colored skin. In secondary syphilis the pieces of the puzzle are arranged in a somewhat different fashion. There

might be a "once in a hundred cases" patient who will volunteer a history of sexual intercourse which might have occurred two or three months previously. There are vague symptoms of sore throat, general malaise, headache and pain in the bones and joints. There may be a low-grade fever, mild generalized lymphadenopathy, and a subsiding chancre or residual scar from the chancre. "Great imitator," as a designation for syphilis indeed applies to its cutaneous manifestations and may resemble almost any other skin disease. "The early secondary lesions are red maculopapules which are symmetrical, superficial and generalized. The late lesions are asymmetrical, deep-seated, grouped and are more or less localized."¹ There are rarely any symptoms of itching, burning or pain. No area of the skin is free from the possibility of invasion by syphilis. Now the observing physician will look for any extra clues, such as the "moth-eaten" alopecia of the scalp, mucous patches of the mouth, and condyloma lata of the moist areas of the anus, genitals and axillae. The blood serology should be positive in secondary syphilis, but beware of a biological false positive which might occur in other diseases.

There are many skin manifestations of diabetes mellitus. These may occur in a person who does not know he has diabetes and will aid in making the diagnosis, or they may occur in a known diabetic whose disease is not under good control. If a patient has generalized pruritus, a paronychia that is slow to heal, gangrene of a toe, monilia infection of the groins or genital regions, furuncles or chronic ulcers, diabetes should be suspected. Xanthoma diabeticorum and necrobiosis lipoidica diabeticorum occasionally occur. Use your eyes first, then verify what you suspect by a urine and blood examination for sugar.

1. Ormsby, O. S., and Montgomery, Hamilton: Diseases of the Skin, Philadelphia, Lea and Febiger, 1954, p. 1026.

I recently saw a lady who stated that her hair had been falling out for several weeks and who was almost bald. On general systemic examination everything seemed to be within normal limits. The hair loss was diffuse over the entire scalp, which helped in narrowing down the possibilities. I suspected an acute illness, a new permanent, an emotional shock, or some chemical agent, such as a hair preparation which might have been applied to the scalp. I was getting nowhere in obtaining a history until I noticed

transverse ridges (Beau's lines) on each fingernail about nine millimeters from the proximal end and the same type of ridge, which was barely noticeable, on each toenail. Fingernails grow at the approximate rate of 0.1 millimeter a day, thus three months ago something happened to alter the growth of the nails and the hair. The patient was astonished when asked what happened to her three months ago, and she broke down and told of having had delirium tremens with a high fever for which she was hospitalized at that time.

DIVERTICULAR DISEASE OF THE COLON A CLINICAL REPORT

WYATT C. SIMPSON, M. D., M. S. in Surgery
Florence, Alabama

Interest in the elective surgical treatment of selected cases of diverticular disease of the colon has developed in recent years.

It seems to us of possible value to review the records of patients admitted to the Eliza Coffee Memorial Hospital, Florence, with diverticular disease of the colon since institution of the master file in 1950.

There have been 100 such admissions, thirty-four listed as diverticulosis and sixty-six as diverticulitis. The diagnosis of diverticulosis is recorded on those patients who were subjected to an intestinal study for various reasons but in whom the finding was considered to be non-productive of symptoms on that admission.

Of the sixty-six patients admitted for the treatment of diverticulitis, 17 or 26% were considered as presenting complications of this disease (Table I). Of these, 8 or 12% of the total number were subjected to surgical treatment (Table II). The indications for surgical interference in this series are listed in Table III.

TABLE I

Complications of Diverticulitis.....	17-26%
Recurrent attacks.....	6
Hemorrhage	4
Perforation with abscess.....	6
With general peritonitis.....	1

TABLE II

Surgical Treatment	
Number of patients operated on.....	8-12%
Number of operations.....	14
Patients with multiple operations.....	3
Hospital deaths.....	2
Coronary occlusion.....	1
Hemorrhage from iliac aneurysm.....	1

TABLE III

INDICATIONS FOR OPERATION IN THIS SERIES

Massive hemorrhage.....	2
Perforation and pericolicitis.....	3
Vesico-colonic fistula.....	1
Repeated attacks in same area.....	1
Perforation and general peritonitis.....	1

The following is a brief clinical summary of the cases treated surgically:

1. Case No. 73182. An 85-year-old male admitted for massive hemorrhage from the colon which failed to subside during 24 hours of treatment by transfusions, bed rest and intravenous alimentation. Diverticulosis of the left colon had been diagnosed roentgenologically elsewhere. Resection of a blood-filled left colon, with anastomosis of the transverse colon to the distal sigmoid, was accomplished without incident and an uneventful recovery ensued.

2. Case No. 69796. A 74-year-old male admitted for massive hemorrhage from the colon which failed to subside during 72 hours of treatment by transfusions, bed rest and intravenous alimentation. Emergency x-ray study of the colon revealed numerous diverticula, with one large one in the mid-sigmoid. At operation it was found that aneurysms of the aorta and both common iliac arteries existed. Resection of the blood-filled sigmoid and anastomosis of the distal descending colon to the distal sigmoid were accomplished. The patient did well until the 5th post-operative day when he went into shock and died. Autopsy revealed that fatal hemorrhage had occurred from rupture of an aneurysm of the right common iliac artery.

3. Case No. 73721.* A 68-year-old male with established vesico-colonic fistula of two years duration. Resection of the sigmoid, end to end anastomosis, and closure of the bladder were accomplished without incident. Convalescence was uneventful until the 3rd day when sudden death occurred from clinically diagnosed coronary occlusion.

4. Case No. 71971.* A 46-year-old female, with long history of episodic lower abdominal discomfort, was admitted with the clinical appearance of

*Patient attended by another surgeon.

a diffuse peritonitis. Emergency operation confirmed this impression and established the origin as due to perforating diverticulitis of the sigmoid. A transverse colostomy was done and a stormy convalescence ensued. One month later a resection of the involved sigmoid was carried out and, two months later, exteriorization of the sigmoid was required, abscess formation at the site of resection having ensued. Subsequently the colostomies have been closed and the patient is now reported by her surgeon as doing well.

5. *Case No. 40241.* A 54-year-old male had been subjected to many episodes of left lower quadrant pain. In the last 2 attacks there had been associated frequency of urination, with aggravation of pain by the act of urination. Roentgenologic study of the colon revealed numerous diverticula, with spasm about a large one so placed that it could have been in proximity to the dome of the bladder. Cystoscopic examination was negative.

With the idea of preventing the development of vesico-colonic fistula, resection of the offending segment of sigmoid was carried out and primary end to end anastomosis accomplished. Convalescence was uneventful. There has been no recurrence of abdominal discomfort (6 years).

6. *Case No. 69867.* A 64-year-old female presented herself with the complaint of severe pelvic pain. Examination revealed a tender mass filling the pelvis, and x-ray of the colon demonstrated diverticulitis of the sigmoid. Despite two weeks of bed rest and antibiotic medication, the pain and tenderness increased, and symptoms of bladder irritation developed. Accordingly, a transverse colostomy was done and two months later the involved area of sigmoid was resected. It was noteworthy that although there was some puckering of the serosa of the sigmoid where it was adherent to the parietal peritoneum, there was no evidence of recent inflammation. Three weeks later the colostomy was closed and the patient has remained well (16 months).

7. *Case No. 53762.* A 45-year-old female was admitted for treatment of a space-filling lesion of the sigmoid discovered by x-ray study of the colon carried out because of cramping, lower abdominal pain. At operation a tumefaction of the mid-sigmoid was exposed, having the gross appearance of an inflammatory rather than a neoplastic mass. Resection was accomplished over a Rankin clamp and the ends brought out as a double barrel colostomy. Four weeks later the colostomy was closed and recovery was uneventful.

8. *Case No. 78195.* A 62-year-old woman with a 2-year history of episodic left lower quadrant abdominal pain entered the hospital with severe pelvic pain and a tender mass filling the pelvis. Previous x-ray study had shown the presence of

sigmoid diverticula, one being larger and more constricted at its neck than the others. She was treated by bed rest, residue-free diet and antibiotics for two weeks during which time symptoms subsided and the mass became smaller and less tender. After a period of 6 weeks rest at home, she returned for resection of the offending area of sigmoid. Convalescence was uneventful and no recurrence of symptoms has occurred (8 months).

COMMENT

1. The finding of diverticulosis constitutes a valuable part of the patient's record as it may well throw light on complications which may arise in the future, such as obscure abdominal pain or intestinal hemorrhage, but do not of themselves require active treatment.

2. An isolated attack of diverticulitis is best managed by conservative treatment but repeated attacks in the same segment present a cogent argument for resection of this segment, particularly if any are attended by symptoms of bladder irritation.

3. An episode of diverticulitis of the colon with pericolicitis and mass formation is best managed by conservative treatment and elective resection unless there is evidence of extension of the inflammatory process, in which case proximal colostomy is required as treatment preliminary to resection.

4. Massive hemorrhage may occur from a segment of colon, the site of diverticulosis without clinical or pathologic evidence of diverticulitis. If conservative measures fail to result in arrest of the bleeding, resection will be required.

5. Although perforation of a diverticulum is usually sealed off by surrounding viscera, a free perforation with progressive diffuse peritonitis occasionally occurs. This is a surgical emergency requiring exteriorization of the involved segment if feasible and proximal colostomy if not.

CONCLUSION

It is felt that more attention should be given to the hazards of prolonged conservative management of diverticular disease of the colon and the advantages of judicious application of surgical treatment in selected cases.

AMA Meeting on the Aged—Problems of the aging and ways that the medical profession can assume leadership in helping to solve them will be discussed at a regional meeting of the AMA's Committee on Aging March 29-30 in Birmingham, Ala. Representatives of the state medical associations of Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina and Tennessee have been invited to attend the conference sponsored by the Council on Medical Service.

RUPTURE OF ARTERIOSCLEROTIC ANEURYSM OF SPLENIC ARTERY

REPORT OF CASE

L. M. VILLIEN, M. D.

and

CHARLES R. LAFFERTY, M. D.

Biloxi, Mississippi

Aneurysm of the splenic artery, although extremely rare, is second only to the aorta as the site of aneurysm in the abdominal cavity. Beausier in 1770 was the first to publish a description of this condition which he had observed on a 60-year-old female cadaver ten years previously. In a comprehensive review, Owens and Coffey¹ in 1955 uncovered 198 cases in the literature and reported 6 additional cases. According to these authors, Hogler² in 1920 made the first preoperative diagnosis of aneurysm of the splenic artery. To Lindboe³ goes credit for the first x-ray diagnosis in 1932. The diagnosis is ordinarily confirmed at surgical exploration or found at autopsy. The conditions most commonly related to or associated with aneurysms of the splenic artery, from the standpoint of pathogenesis, are arteriosclerosis, embolism from endocarditis, congenital anomalies, trauma, and occasionally infection. Pregnancy was present in twenty-four per cent of the females reported. Syphilis is rarely an associated condition in this particular type of aneurysm. A report on this subject cannot be written without indebtedness to Owens and Coffey for their intensive research. They have brought the subject matter up to date allowing for comparative studies.

Our case report deals with one properly interpreted preoperatively by the roentgenologist, and authenticated at necropsy. So many pathologic entities were operating simultaneously that the general condition of the patient precluded surgical operation and intervention during his terminal illness.

REPORT OF CASE

The patient, a 68-year-old white male, was admitted to the NP hospital in October 1954. He carried a diagnosis of chronic brain syndrome associated with cerebral arteriosclerosis, with psychosis, manifested by mental confusion, disorien-

tation, loss of memory, and defective judgment. Also in evidence were the findings of generalized arteriosclerosis and arteriosclerotic heart disease. From the time of his admission the patient's hospital stay had been uneventful except for the episodic manifestations of his chronic brain syndrome. In April 1957 a transurethral operation was performed. It was at this time, while in preparation for surgery, that first mention of aneurysm of the splenic artery was made. X-ray interpretation was as follows:

"Intravenous pyelograms with examinations at 4, 10, 15 and 30 minutes show evidence of excretion on all films. The right ureter, pelvis and calices are fairly well visualized and show no gross abnormalities. On the left the pelvis and several of the middle minor calices are poorly visualized and there is a suggestion of a pressure deformity. Both renal arteries show arteriosclerosis. In the upper abdomen just below the diaphragm and just to the left of the spine there is an ovoid mass which is outlined by patchy calcification of the walls. The lower pole of this lies against and on the lateral side of the upper pole of the kidney. The impression is that this is extrinsic to the kidney, however. This has the appearance of a cystic mass with calcification changes in the wall. It is medial to the normal location of the spleen. It is suspected that this is probably an aneurysm of the splenic artery."

The patient had a slow uneventful recovery from his transurethral resection.

The family history reveals no pertinent information. The mother died of paralysis at 74 years of age. The father died of angina at 86 years of age. Two brothers and one sister all died of ruptured appendices. There was no familial history of tuberculosis, syphilis, cancer, diabetes, nephritis or mental illness. The patient was never married. In 1934 he was hospitalized with the diagnosis of syphilis (age 47), myocardial insufficiency, and chronic cholecystitis. He received adequate anti-luetic treatment. The spinal fluid surveys were always negative. In 1948 the patient was again hospitalized for mild hypertension and obesity. The serology was negative. In 1952 he was hospitalized again and discharged with diagnosis of hypertensive cardiovascular disease and generalized arteriosclerosis.

At morning rounds June 26, 1957 the patient

From the Veterans Administration Center, Gulfport Division.

1. Owens, J. D., and Coffey, R. J.: Aneurysm of the splenic artery, including a report of 6 additional cases, Surg., Gynec. and Obst. 97: 313-335, 1953.

2. Hogler, R.: Beitrag zur Klinik des Leber-und Milzarterien Aneurysmas, Wien. Arch. f. inn. Med. 1:543, 1920.

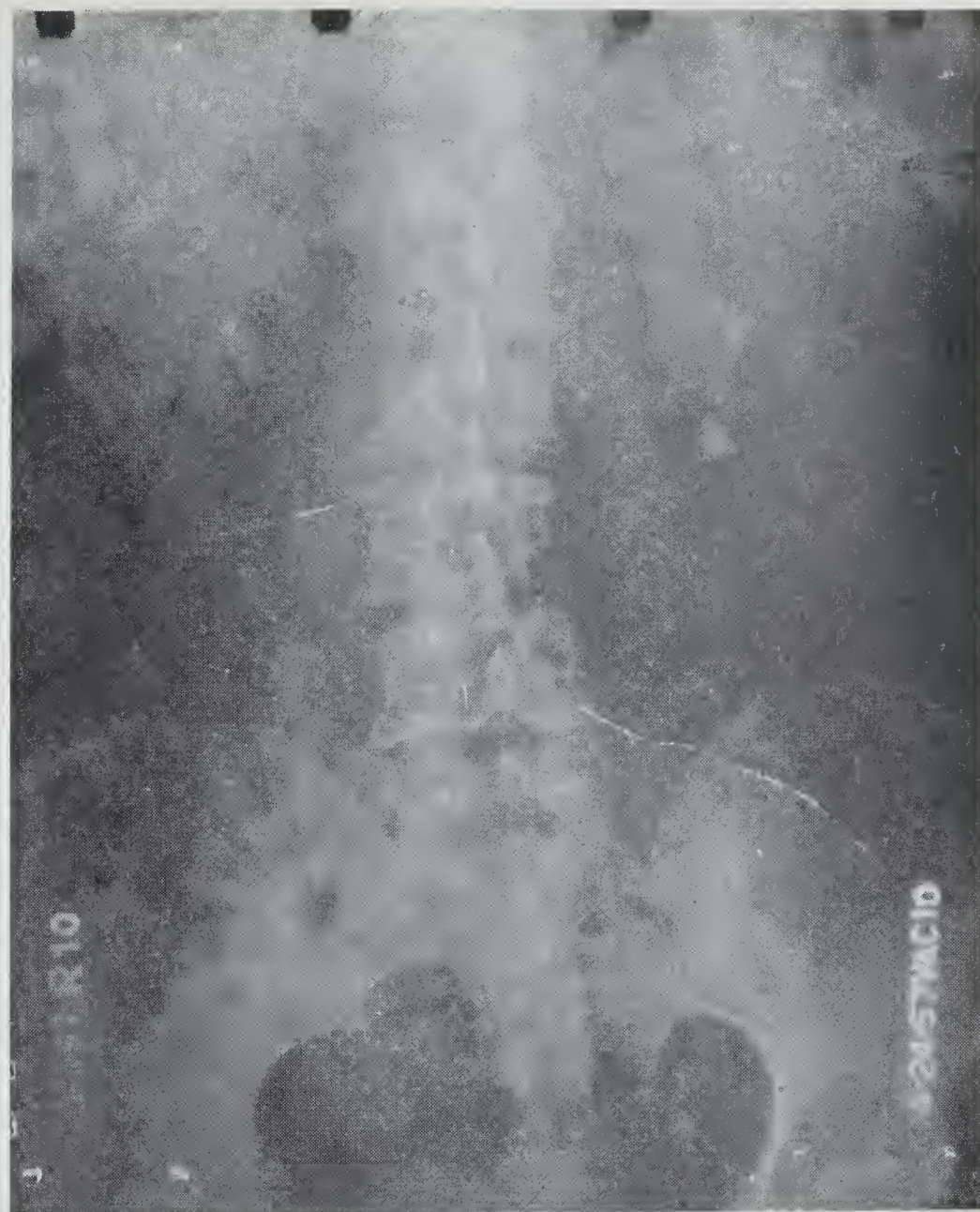
3. Lindboe, E. F.: Aneurysm of the splenic artery diagnosed by x-rays and operated on with success, Acta chir. Scandinav. 72: 108, 1932.

complained of severe backache. Subsequently, he developed difficult breathing, with cardiac arrhythmias and pulse, at times imperceptible. Nausea and vomiting were present, with moderate cyanosis. He was given oxygen and transferred to acute infirmary. The etiologic picture at this moment was not too clear. Within a few hours the cyanosis increased despite the use of oxygen. B. P. dropped to 70/40, pulse continued to be markedly irregular. Heart sounds were distant and barely audible. It was apparent the patient was in profound shock and the prognosis was grave. He was placed on the seriously ill list and given the usual supportive measures. The B. P. fell as low as 50/30. Within the hour, however, improvement was noted. The next morning the patient's B. P. was 114/76, pulse 84, with some irregularity. Temperature was 101.4° and during the day rose to 105, subsiding with antipyretic measures. Nevertheless, the general picture at this time was still poor. Dysarthria was present. There was moderate confusion, with a slight suggestion of right facial lag. Pupils were round, regular and reacted. There was no paralysis or loss of strength of the extremities. The patient could swallow water but it was felt that he had had a cerebral vascular accident. The EKG showed no changes except those of arteriosclerotic heart disease. Chest x-ray showed a definite area of pneumonitis in the lower right lung field. I. V. pyelograms July 1, 1957 failed to visualize either kidney, and an added pathologic entity of malignancy of the left kidney was suggested, with the decision that nephrectomy per se would accomplish very little and the possibility of sudden surgical death was too great. The abdomen was moderately distended, with rigidity on the left side and progressive tenderness, with a sizable mass in the left lumbar and umbilical regions showing unquestionable signs of progressive enlargement. For a few days the patient's condition remained precarious. On July 14, eighteen days later, he had an episode similar to the one described above. Forty-eight hours prior to expiration it was quite apparent that the patient was hemorrhaging in the abdominal cavity. He died on July 16, 1957.

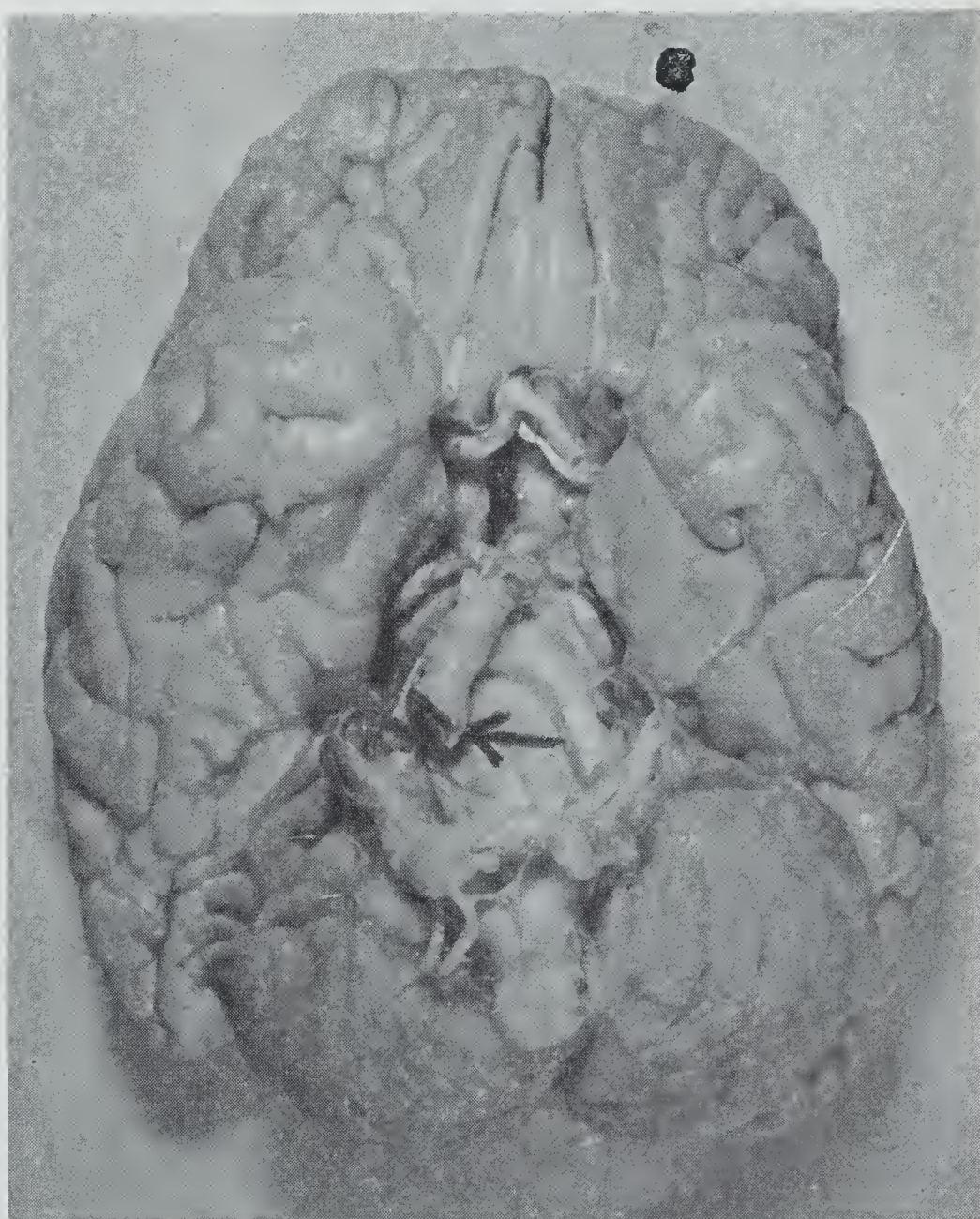
SUMMARY OF POSTMORTEM FINDINGS

On opening the peritoneal cavity the intestines were displaced to the right. They were smooth and gray and there was no evidence of distention. When the intestines were removed a large hemorrhagic mass was found on the left side of the peritoneal cavity extending from the diaphragm to the crest of the pelvis; the origin appeared to be superior to the kidney, as the greatest accumulation of blood was noted in this area.

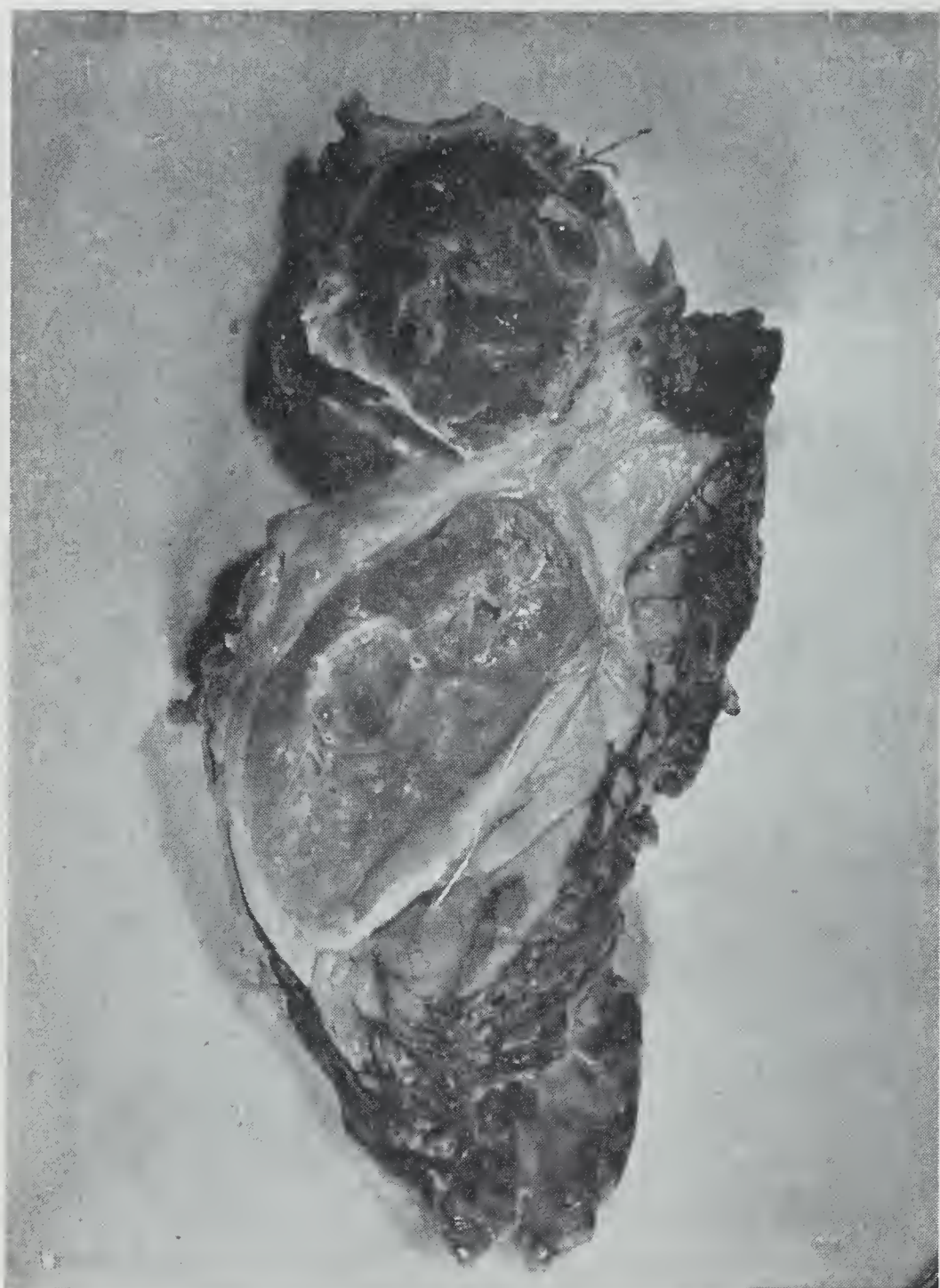
The spleen was soft, purplish-gray, and was undergoing degenerative changes. The spleen was



Calcified outline of aneurysm of splenic artery.



Arteriosclerotic fusiform aneurysm of basilar artery containing organized thrombus.



Cross section of ruptured arteriosclerotic fusiform aneurysm of splenic artery.

attached to the surface of the hemorrhagic mass. The splenic artery was explored, beginning at its origin from the aorta. It was tortuous, somewhat dilated, and on the cut section extensive calcification and degeneration of the artery's wall were noted. Further exploration of the artery revealed a fusiform dilatation filled with a laminated organized blood clot. On the posterior surface of the aneurysmal dilatation was a small perforation, and surrounding the organized blood clot the wall of the splenic artery was calcified, thin, and revealed marked evidence of degenerative changes. The aneurysmal dilatation measured 10 inches by 14 inches and extended to the spleen. The spleen was soft, pinkish-red, weighed 235 grams, and on cut sections the splenic pulp was very soft, light red and adhered to the knife when scraped.

The heart weighed 450 grams, was dark reddish-brown, firm, and on the cut section definite thickening and hypertrophy of the musculature of the left ventricle were noted. The endocardium was smooth and gray. The mitral valve was free, thin and intact, and the middle leaflet of the aortic valve showed calcification at its base, but there was no functional deformity of the valve. The right and left coronary arteries were patent. How-

ever, their walls were thickened, due to arteriosclerosis. The aorta revealed marked arteriosclerotic changes, with numerous areas of degeneration evidenced by atheromatous plaques, calcification and ulcerations, but there was no evidence of rupture.

Both lower lobes of the lungs were congested; otherwise they were essentially negative.

The liver weighed 165 grams, firm and brown, and on the cut sections no evidence of cirrhosis was noted.

The gallbladder contained no stones, and the wall was thin.

The adrenal glands were within normal limits, firm and yellow, and on the cut sections normal markings were noted.

The kidneys were essentially negative except for a small retention cyst in the left kidney.

On removing the calvarium the dura appeared to be under increased pressure, and beneath the dura was a moderate quantity of white cloudy fluid. The cortical surfaces of the brain were flattened. The brain weighed 1425 grams. Cerebral hemispheres were equal and symmetrical, and on the cut sections there was some narrowing of the gray matter and slight dilatation of the lateral ventricles. The temporal lobe, pons, medulla and cerebellum were equal and symmetrical. Cut sections revealed minute areas of softening. The third and fourth ventricles were not dilated. The nuclei of the basal ganglia had their normal outline and revealed no large areas of degeneration. Examination of the basilar artery revealed a definite fusiform aneurysm measuring $2\frac{1}{2}$ cm. in length and 1 cm. in width. On the cut section there was thinning and calcification of the aneurysm's wall. The aneurysm was partially filled with a well-organized thrombus. Examination of the perforating arteries of the brain revealed numerous yellow atheromatous plaques.

The principal microscopic findings in examination of the tissue were degeneration of the splenic artery due to arteriosclerotic changes; necrosis and fibrosis of the media with calcification; a deficiency of the internal elastic lamina, and attached to the intima of the splenic aneurysm was a laminated organized blood clot containing many white blood cells and fibrin. The tissue surrounding the splenic artery revealed extravasation of red blood cells into the fat tissue. Microscopic examination of the spleen showed dilatation of the sinusoids, which were filled with pink-staining fluid. The stroma stained lightly.

Sections taken through the liver showed some dilatation of the sinusoids, with atrophy of the hepatic cells adjacent to the central veins.

Sections taken through the heart revealed hypertrophy of the muscle fibers.

Microscopically, the sections of the brain showed several small areas of necrosis in the basal ganglia and medulla. Many of the ganglion cells in the cortex, basal ganglia and medulla showed loss of granules. The pyramidal cells of the cortex revealed evidence of atrophy and a moderate increase in astrocytes in the stroma.

Sections taken through the basilar artery revealed degeneration of the media, fibrosis and calcification, loss of elastic tissue fibers, and attached to the artery's intima was a well-organized blood clot almost entirely of fibrin. Sections taken through other arteries of the brain showed atheromatous plaques in the intima.

The primary cause of the patient's death was rupture of an arteriosclerotic splenic aneurysm. The spleen showed evidence of impaired blood supply by degenerative changes. The arteriosclerotic aneurysm of the basilar artery caused impaired circulation to the brain which resulted in multiple areas of degeneration throughout the cortex and basal ganglia. The microscopic examination of the splenic artery showed advanced degenerative changes due to arteriosclerosis. The splenic artery was tortuous, and it is believed by some authors that this tortuosity plays a part in the formation of arteriosclerotic aneurysms in the splenic artery. Incidental finding was a fusiform arteriosclerotic aneurysm of the basilar artery.

SUMMARY

In this case report it is noted that there is considerable deviation from the usual clinical picture. Splenomegaly was not present. The patient had neither hematemesis nor melena. Liver cirrhosis was absent. Among the common findings, pain was an outstanding feature resembling very much the type found in acute pancreatitis. The patient vomited intermittently during the final days. There was extreme tenderness on pressure in the upper left quadrant, but, due to distention, localization beyond this was impossible. Distention also precluded the detection of a pulsatile tumor. It was unfortunate that surgery, even in the form of a simple ligation, was not considered feasible. Aortography was omitted, as this would have been purely an academic procedure.

CONCLUSION

A case is reported of an arteriosclerotic aneurysm of the splenic artery diagnosed by x-ray before death. This aneurysm ruptured and caused extravasation of blood into the surrounding tissue and was the primary cause of death.

Denver Physicians Study Asian Flu Deaths—Statistics uncovered by five Denver physicians shed new light on the seriousness of the Asian influenza epidemic which reached its peak last October.

The number of Denver deaths following influenza indicated that "there may be a higher mortality associated with this disease than previously believed," they said in the February 1 Journal of the American Medical Association.

They studied 23 deaths found at autopsy to be due to acute respiratory inflammation. The deaths occurred between Oct. 3 and 17, 1957. Although these are "relatively few" deaths, their number is eight times greater than the number of respiratory disease-caused deaths usually seen in the Denver coroner's office for the month of October.

Commenting on the report, Dr. Harold C. Lueth, Evanston, Ill., chairman of the A.M.A. special committee on influenza, paid tribute to American physicians and public health officials for preventing an even greater number of deaths.

"Through a nationwide educational campaign, the public was alerted to the potential dangers of the Asian influenza epidemic. Early vaccination prevented many cases of influenza, while early treatment of those cases that did occur undoubtedly prevented many cases of pneumonia," Dr. Lueth said.

Various types of pneumonia were associated with all the Denver deaths.

They were among 93 deaths reported in Colorado during October to be due to acute respiratory disease. During that month nearly 20,000 cases of influenza were reported in the state, excluding the city and county of Denver. Eleven million new cases of respiratory ailments were reported to the U. S. Public Health Service in each of the two middle weeks of October. By December, the rate had fallen to less than three million a week.

The study of the 23 "unexplained, unusual or unattended" deaths showed that the individuals died after a brief illness, ranging from one to seven days. Autopsy showed excessive inflammation of the larynx, trachea, and bronchus. In a few cases, the early symptoms suggested severe respiratory disease, but in most the symptoms were mild.

In 16 cases no treatment was given; in the others, it was of an unknown type or consisted of aspirin, cough syrup, or antibiotics.

The study bore out earlier predictions that Asian flu would be most dangerous to the elderly, the very young and the chronically ill. Of the 23 deaths, seven were persons over 50 years of age; four infants less than three months old, and three children between five and ten years old.

Alcoholism and/or chronic liver disease was present in 11 of the 13 persons over 30 years of age. Other associated conditions were epilepsy, prematurity, chronic rheumatoid arthritis, Mongolism, and bronchiectasis.

The doctors noted that the types of pneumonia appearing in these individuals were similar to those reported during the 1918-20 influenza epidemic. However, some findings, including severe changes in the internal organs, reported in 1918 were absent. In general, the age group was more widespread than in the 1918-20 epidemic and the duration of symptoms was shorter, they said.

In conclusion, the doctors raised the question of antibiotic treatment for influenza and subsequent ailments. They suggested that careful medical attention and antibiotics should be given to chronically ill persons, especially those with alcoholism and/or chronic liver disease, who contract influenza.

ANNUAL SESSION
MONTGOMERY
APRIL 17, 18, 19

THE POSSIBILITY OF SURGICAL STRESS AS AN ETIOLOGY OF SECONDARY PORPHYRINURIA

JOHN L. JEFFRIES

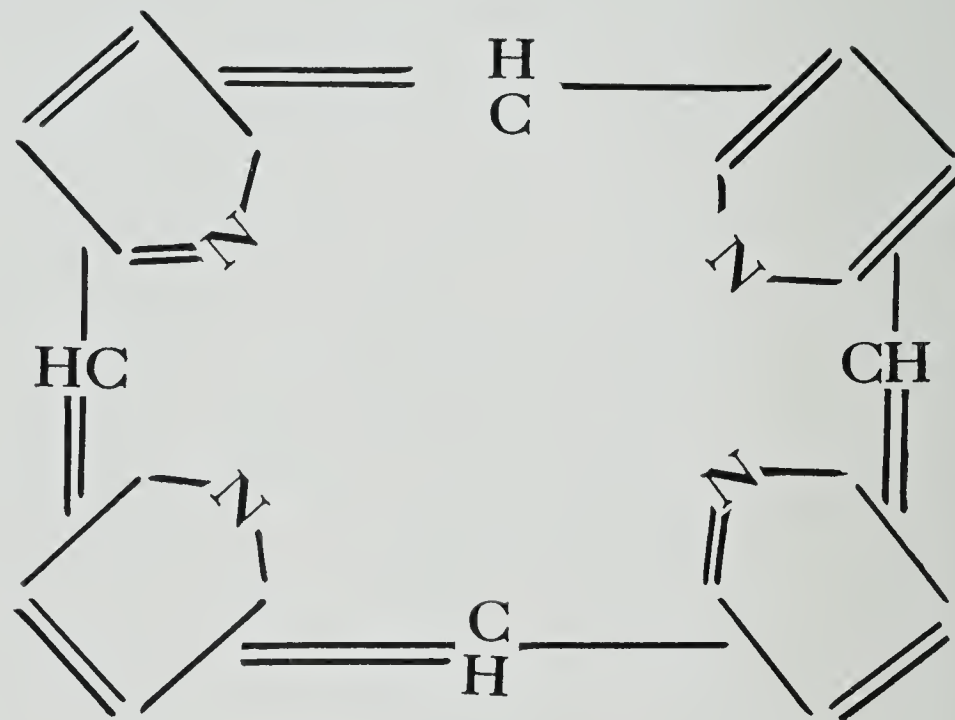
Birmingham, Alabama

In anesthetized patients hemolytic transfusion reactions may occur without drop in blood pressure or other overt signs. The initial evidence of such a catastrophe is the passage of "Coca-Cola urine" in the immediate postoperative phase. Surgeons have learned to watch for this mahogany urine in every patient receiving a blood transfusion during an operation. In the case to be discussed herein, similarly colored urine was passed by a postoperative patient, but study suggests that the color was due to coproporphyrinuria and disturbed hepatic function rather than to a hemolytic transfusion reaction.

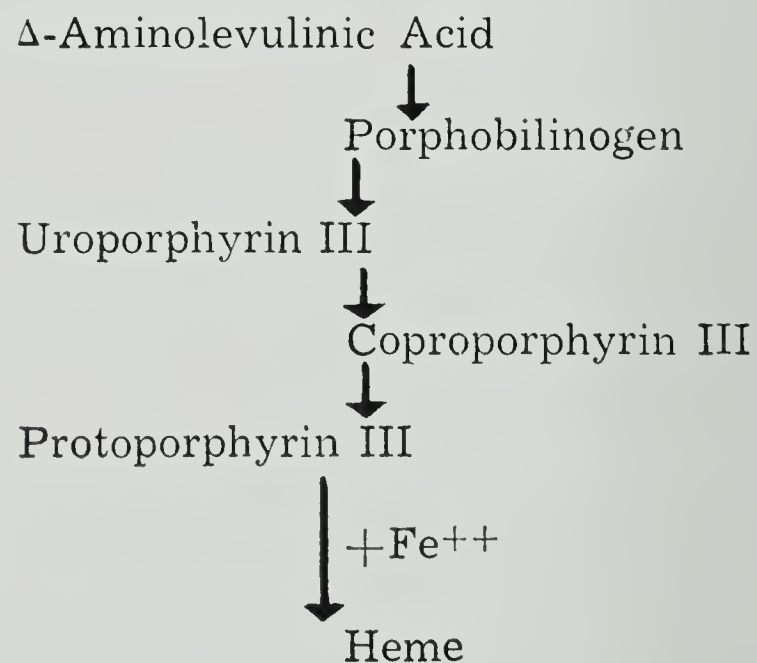
In considering porphyrins, it is seen that they are complex compounds that take their name from the Greek "porphura," meaning purple.¹ Some type of this basic compound has been found in almost every kind of biological tissue studied. Teleologically they are extremely important, and are formed through a process of chemical evolution whereby the products of a reaction act as catalysts for further similar reactions.² Photosynthesis is carried out by a green magnesium porphyrin, chlorophyll. The iron porphyrin heme is essential in energy transfer as in hemoglobin, myoglobin, catalase, peroxidases and cytochromes.³ Almost all unicellular organisms contain porphyrins as erythrocrucorins or chlorocruorins. Petroleum deposits contain a vanadium porphyrin.³

Present knowledge of porphyrin metabolism had its foundation in researches of a German physician and chemist, Hans Fischer. He became interested in a patient named Petry whom he found suffering from disturbance in porphyrin metabolism now recognized as "erythropoietic porphyria." Fischer isolated a dark red-brown pigment from the patient's urine and named it "uroporphyrin." A second red-brown pigment, present in both urine and feces, he named "coproporphyrin." In a series of further studies he showed the porphyrins are related structurally to a parent compound which he called "porphin." This contains 4 pyr-

role groups bound together in a ring structure by alpha-methene bridges.⁴



Fischer then further established a classification of porphyrin compounds based upon their structural relationship to one of four isomeric derivatives of porphin. The basic group is similar, the isomerism lies in the side groups. On this basis there exists uroporphyrins I and III and coproporphyrins I and III. Coproporphyrin is excreted mainly in feces, uroporphyrin in urine. About 10-100 micrograms of coproporphyrin are excreted in urine per 24 hours, and 150-300 micrograms in feces. Type I predominates over type III.⁵ The metabolism of porphyrin compounds has not been completely worked out. Several alternate schemes have been proposed. One is as follows:



From the Department of General Surgery, Medical College of Alabama.

The author is a senior student in the College.

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2. Calvin, M.: Chemical Evolution and the Origin of Life, American Scientist, July '56.

3. Aldrich, R. A., and Labbe, Jalman: Review of Porphyrin Metabolism with Special Reference to Childhood, Am. J. Med. Sc., December '55.

4. Sunderman and Sunderman: Practical Consideration of Diseases of Porphyrin Metabolism, Am. J. Clin. Path., November '55.

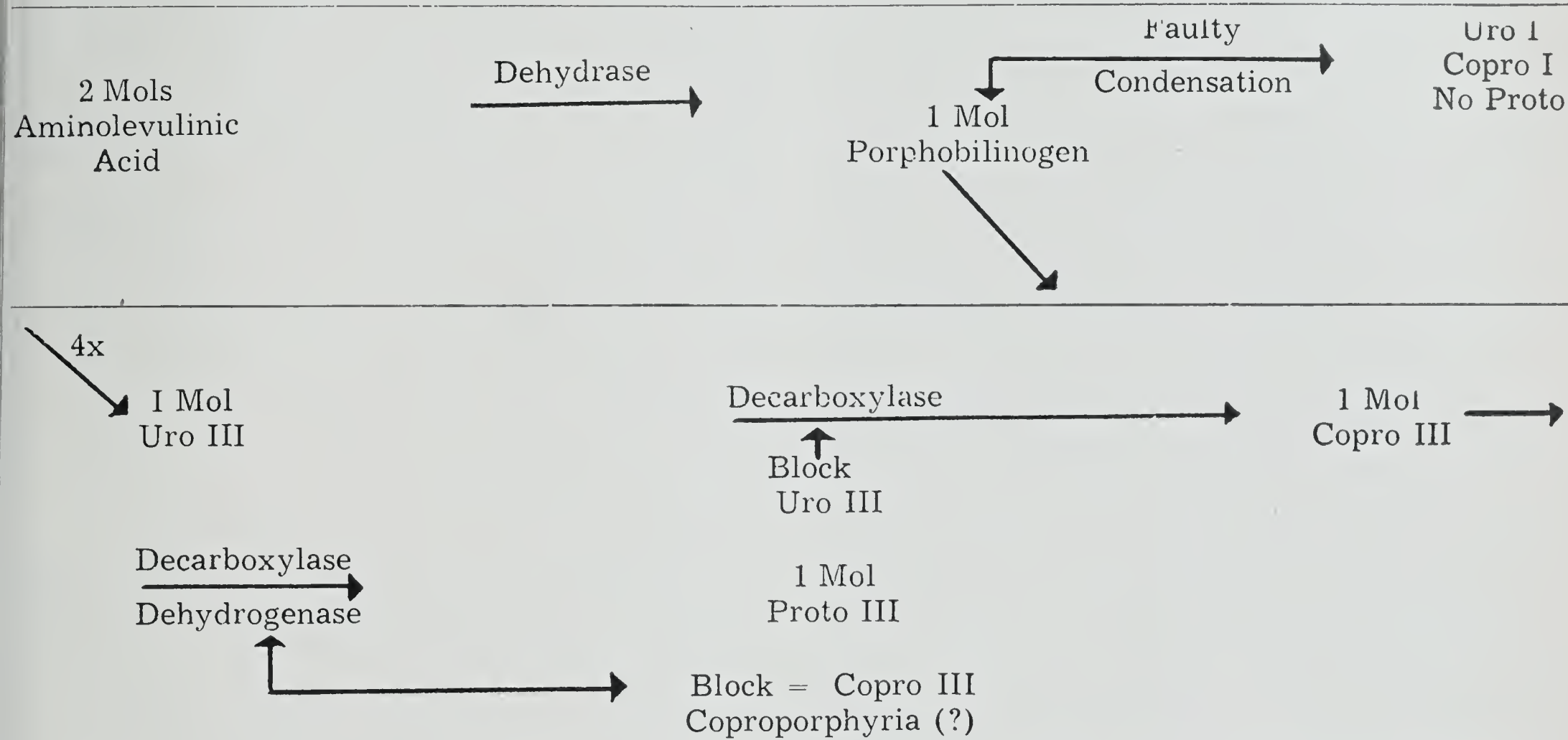
5. Harrison, T. R.: Textbook of Medicine, 2nd edition, 1956.

SECONDARY PORPHYRINURIA

This has been further worked backwards so that active succinate and glycine are now known to combine to form Δ -amino levulinic acid.³ The Krebs cycle has been correlated with active succinate production.⁶ A block in any part of the metabolic chain may produce an increased excretion of one of the porphyrin compounds. Waldenstrom has postulated the following abnormal possibilities:⁷

males. Symptoms include:

1. Continuous excretion of porphyrins.
2. Increased porphyrins in the blood.
3. Pigmentary discoloration of teeth, bones, and skin.
4. Cutaneous eruption and light sensitivity.



Metabolic blocks of these types cause disease states or syndromes. The term "porphyria" is used to denote disease states in which relatively large amounts of uroporphyrins appear in the urine. These may be excreted preformed, or as their precursor porphobilinogen. In addition, there is usually increased excretion of urinary and fecal coproporphyrins. The term "porphyrinuria" is used to denote those conditions in which abnormally large amounts of porphyrins other than uroporphyrins appear in the urine. The coproporphyrins predominate. In man porphyria is usually a secondary manifestation of a variety of pathologic conditions.⁴ Clinical classifications of the porphyrias include two broad groups, congenital and adult.⁵ This classification is as follows:

I. Congenital:

A defect in synthesis of hemoglobin with an accumulation of protoporphyrin precursors in bone marrow and other erythropoietic tissues. This is recessive and affects mostly

II. Adult:

This group includes acute, chronic, and secondary porphyrias and is usually thought to be due to disturbances in metabolism of porphyrin-containing catalase.

A. Acute symptoms are:

1. Intermittent excretion.
2. Acute colicky lower abdominal pain.
3. Hematologic manifestations.
4. Leukocytosis.
5. Occasional jaundice. This is dominant and affects mostly males.

B. Chronic symptoms are:

1. Light sensitivity.
2. Continuous increased excretion.
3. Abdominal cramps with nausea and vomiting.
4. Nervous depression.
5. May be asymptomatic.

C. Secondary Porphyria (Porphyrinuria):

The symptoms are those of the primary disease. The only finding is increased excretion.

It is to the group of porphyrinurias that attention must be turned. The literature has been reviewed by Vannotti, Dobriner and Rhoads, and

6. Wriston, J. C.: The Mechanism of Porphyrin Formation. Further Evidence on the Relationship of the Citric Acid Cycle and Porphyrin Formation, J. Biol. Chem., August '55.

7. Waldenstrom: Porphyrias as Inborn Errors in Metabolism, Am. J. Med., May '57.

Watson and Larson. The most widely studied group is that associated with chemical toxicity. Coproporphyrinuria has followed exposure to (1) various metals, such as lead, arsenic, mercury, bismuth, copper, iron, gold, silver, zinc and phosphorus, (2) sedatives such as Veronal, sulfonal, paraldehyde, chloral hydrate, amylene hydrate and morphine, (3) the sulfonamides, (4) alcohol, and (5) certain organic compounds encountered in industrial medicine such as TNT, methyl chloride, and carbon tetrachloride. Increased excretion has also followed in states of hypermetabolism such as fevers, thyrotoxicosis, and exercise; in hepatic diseases such as cirrhosis, infectious hepatitis, and carcinomatosis; in hematologic conditions as pernicious anemia, hemolytic anemias, hemochromatosis, leukemia and Hodgkin's disease; in hypovitaminosis pellagra and ariboflavinosis. Lastly, there is an asymptomatic idiopathic group with no history of exposure to infection, chemicals, etc. There is no uro- or porphobilinogen, all are adults, and there is no other affected member in the family.^{4, 8, 9, 10, 11} Urinary coproporphyrins have also been found elevated in pseudohypertrophic muscular dystrophy¹² and following acute myocardial infarction and pulmonary embolism.¹³ It is of much interest that Vannotti detected an increase in urinary coproporphyrin after exhausting athletic exercises in individuals out of training, but none in athletes in fine physical condition.¹⁴ This is a situation obviously in which stress has become an etiologic factor in porphyria. That other forms of stress may be causative is possible. Consider the following case history:

Mrs. L. M. I. was admitted to the University Hospital on 8/15/57 with complaints of 1½ years duration of intermittent epigastric pain which came on one-half to two hours after meals and could be alleviated by ingesting food. The pain increased. Five months PTA x-ray diagnosis of duodenal ulcer was made. She was placed on Malox,

cream, and Pathibamate. Her symptoms were temporarily relieved, but never did abate. Further x-ray studies revealed pyloric obstruction. She never noted dark colored urine and had not had abdominal complaints prior to the present illness. She had no drug allergies and had not experienced any transfusion reactions. There were no known familial diseases. Admission physical revealed a mass to the right of the umbilicus. Preoperative medications included Luminal Sodium, Demerol, Synkayvite, penicillin and neomycin and intravenous fluids. Two units of blood were given on day of operation. Subtotal gastrectomy was done and specimen revealed carcinoma from glandular mucosa. At no time during the preoperative phase was dark urine noted. On the first postoperative day, dark mahogany-brown urine was seen. It was thought a transfusion reaction had occurred but further investigation including studies for both coating and free-floating antibodies did not substantiate this. The Watson-Schwartz test for porphobilinogen was negative, and urinalysis showed no abnormal elements. Fluorescence of urine revealed 3+ coproporphyrin and negative uroporphyrin. Production of dark urine continued intermittently for several days. On the sixth postoperative day, fluorescence revealed coproporphyrin 1+ and negative uroporphyrin. Watson-Schwartz test was still negative. Postoperative medications were Demerol, Luminal Sodium, penicillin, and streptomycin and Pantopon. Clinical postoperative course was satisfactory, without infection or complication, and she was discharged on the eleventh postoperative day.¹⁵

To state that in this instance coproporphyrinuria was due to surgical stress may be reasonable. To be more specific is extremely difficult. The broad concept of stress as found in the field of surgery covers an entire jungle of ramifications most of which have not been completely delineated. The postoperative phases of trauma, adrenergic-corticoid, corticoid withdrawal, spontaneous anabolic, and fat gain are known to all familiar with the field.¹⁶ However, these are only signs or single facets in a complexly changing system. The stress applied may include combinations of soft tissue damage, fracture, hemorrhage, oligemic shock, anesthesia and other medications, starvation, immobilization, infection, and pain, fear, apprehension, anxiety, and restlessness. The response organ-wise is many fold. Adrenal corticoids go up, then down. Urinary steroids parallel this, as do changes in blood circulating elements, nitrogen balance, potassium and sodium balance. Complications which prolong stress also prolong phases of

15. University Hospital Clinical Chart, Mrs. L. M. I., Unit Number B-88703.

16. Moore, F. D.: Bodily Changes in Surgical Convalescence, *Ann. Surg.*, March '53.

8. Porphyrins, *Year Book of Medicine*, 1956-1957.

9. Watson, C. J.: *Porphyria*, *Advances Int. Med.*, Vol. VI, 1954.

10. Dobriner, and Rhoads: *The Porphyrins in Health and Disease*, *Physiological Reviews*, Vol. 20, No. 3 (July) 1940.

11. Watson: *Porphyria Metabolism and Porphyria*, *Lancet*, March 10, '51.

12. Ritter, J., and Seligson, D.: Elevations of Serum Glutamic-Oxalacetic Transaminase and Urinary Coproporphyrins in Pseudohypertrophic Muscular Dystrophy, *Am. J. Med. Sc.*, May '57.

13. Eskola, O.: Increased Urinary Coproporphyrins Following Acute Myocardial Infarction and Pulmonary Embolism, *Am. Heart J.*, February '55.

14. Vannotti, A.: *Porphyria: Their Biological and Chemical Importance*, London, Hilger and Watts, Ltd., 1954.

response. Intercurrent stress, such as late infection, pulmonary embolism, wound dehiscence, hemorrhage, or emergency secondary surgery, causes a secondary phase response qualitatively similar to the initial change. Anesthesia alone has been found to increase blood corticoids.¹¹ There is apparently no systematic alteration in epinephrine and norepinephrine levels in surgery. Decreases in urine volume have been attributed to an antidiuretic substance which does not yet exactly correlate with the posterior pituitary factor. All of these factors are certainly ample evidence that there are true and basic deviations in metabolic processes following stress.

But what of stress as a factor in secondary porphyrinuria? The patient cited had not had previous known episodes of high urine porphyrins. Her medications preoperatively and postoperatively were similar except for Pantopon which was given irregularly on two days and did not coincide with rise or fall of urine porphyrins. The literature contains no references to support the thesis of surgical stress causing coproporphyrinuria.

The answer may lie in postoperative hepatic metabolism. The secondary type abnormal porphyrin states are thought to occur in relation to a defect in porphyrin containing liver catalase.⁵ There is fairly good evidence that hepatic dysfunction does occur postoperatively. Cole¹⁷ found hepatic cytochemical changes following surgical stress. MacGregor¹⁸ found increased serum alkaline phosphatase and decreased plasma prothrombin to be indices to hepatic changes following stress. That the traumatized adrenalectomized animal shows high blood corticoid levels on constant dosage is thought to indicate hepatic breakdown dysfunction.¹⁹ Blood changes after stress include a decrease in circulating red cell mass, an increase in blood fibrinogen, and low blood iron levels. Scott and Howard found hepatic function to be depressed following injury as judged by sulfobromophthalein retention, bilirubin levels, and flocculation and turbidity tests. Blood ammonia levels are high both because of higher levels in the portal venous blood and because there was less removed by the liver. One series reports a trend toward A/G reversal in 80 per cent of postoperative subjects.²⁰ They postulated that dis-

turbance of the enzyme systems of the liver may be responsible for alterations in serum proteins. The hepatic function tests done on the patient, Mrs. L. M. I., cited in this report revealed a preoperative bromsulfophthalein retention of 2%. On the second postoperative day the direct Van den Bergh was 3.1 and indirect Van den Bergh was 3.1. This had fallen to direct 0.3 and indirect 0.5 by the fourth day. Normal total is usually 0.2 to 0.8 mg. per cent. The icteric index on the third day was 7.6 units with 6.0 as upper normal. On one occasion on the first postoperative day the serum was noticeably icteric but no index was run at that time. That some degree of hepatic dysfunction did occur in this patient during her recovery phase seems reasonable. It is, therefore, the postulate of this presentation that surgical stress is an etiologic factor in coproporphyrinuria, and that its basis lies in transient changes in liver metabolism.

In conclusion, it must be emphasized that this paper presents only a possibility, not a foregone or rigid conclusion. Anything other than interested speculation on a series of one patient would be grossly presumptuous. With these reservations in mind, the facts are that the patient did exhibit transient coproporphyrinuria for the first time during the immediate postoperative period, that no specific medications could be blamed, that no transfusion reactions occurred, and there was no preexisting liver disease. Even though the literature has no specific mention to make of porphyrinuria following surgical stress, it does have fairly good evidence for transient hepatic dysfunction in the postoperative period. Since metabolic changes within the liver are known to affect porphyrin metabolism, it has seemed reasonable to correlate factors related between stress, transient hepatic metabolic dysfunction, and porphyrinuria. Even though definite conclusions cannot be drawn, existing evidence shows good reason at least for further observation and investigation.

Hats Off to Auxiliary "Today's Health" Champions—

Winners of the 1957 Woman's Auxiliary *Today's Health* Christmas gift subscription contest recently were announced as follows: Group I—Greenwood-Woodson counties, Kan., Mrs. Harry A. West, president, Mrs. Robert L. Obourn, T. H. chairman; group II—Indiana county, Penna., Mrs. Frederick Dills, president, Mrs. Leonard Volkin, T. H. chairman; group III—Ohio county, W. Va., Mrs. Earl S. Phillips, president, Mrs. Robert W. Leibold, T. H. chairman; group IV—Cook county, Illinois, Mrs. Richard E. Westland, president, Mrs. Mitchell A. Spellberg, T. H. chairman. Ten dollar checks have been sent to the presidents of these four winning local auxiliaries. Special recognition for their outstanding efforts will be given at the *Today's Health* workshop during the Woman's Auxiliary annual convention in June in San Francisco.

17. Cole, J. W.: Cellular Changes in Surgical Stress, Surgery, July '56.

18. MacGregor, C. A.: The Influence of Stress Upon Liver Function in Obstructive Jaundice, A. M. A. Arch. Surg., September '55.

19. Moore, F. D.: Endocrine Changes after Anesthesia, Surgery, and Unanesthetized Trauma in Man, Recent Progress in Hormone Research, Vol. XIII, 1957.

20. Rhoads, J. E.: The Metabolic Response to Trauma, Ann. Review of Med., Vol. 7, 1956.



Editorials

LUNG CANCER MORTALITY STUDY TO BE MADE

The National Cancer Institute and the Department of Health, Education, and Welfare are undertaking a study of deaths from lung cancer and have requested the support of the physicians of Alabama in such a study. It is proposed to obtain detailed histories—including that of smoking—on about forty deaths in Alabama during the coming year. Total deaths from lung cancer in 1956 were 370, so this represents about ten per cent of the expected deaths this year.

The Board of Censors of the Association has heartily endorsed this study and is calling it to the attention of those physicians who may be asked to forward detailed information.

STRINGFELLOW MEMORIAL HOSPITAL

Located on a grassy hill surrounded by pine trees at 19th Street and Leighton Avenue in Aniston, Susie Parker Stringfellow Memorial Hospital will afford a quiet and restful atmosphere for patients with chronic diseases.

Dedication services and open house were held on the afternoon of Jan. 26, and at that time residents and visitors to the city had full opportunity to inspect the beautiful, \$365,000 one-story building with equipment.

The new hospital replaces a private residence operated at the same location between the years 1937 and 1955 as a tuberculosis sanatorium, provided for by the will of the late Mrs. W. W. Stringfellow who died in February 1920.

In contrast to the building preceding it, which was of Italian-type architecture, the one that now stands is of streamlined modern design, planned in every detail to suit its unusual purpose of serving the needs of the chronically ill. It is the only institution of its kind in the state and there are known to be few in existence in the entire country.

Its administrator, Billy N. Glass, has described it as being "half-way between a nursing home and a general hospital," and without any emergency or operating room.

The private and semi-private rooms are all comfortably furnished in modern decor with walls and ceilings in soft, pastel colors in combination with off-white. One wall in each room is almost completely in glass with draw curtains and a sliding door giving outside entrance through which patients in wheelchairs may roll onto a sun terrace.

Toilets and showers in separate, spacious, all-tile compartments flank either side of the inside entrances of each room. Two bathtubs are provided that are especially equipped with a derrick for lowering and lifting patients in and out of the bath.

Special accommodations for the enjoyment of patients include a community-type sun terrace in the center of the building, lounges for reading, writing and talking, and a special recreation area that may be merged with the dining room by the opening of accordion-type doors. A combination doctors' lounge and conference room is also provided.

Upholstered furniture is all chromium and plastic in a variety of blending colors, and large areas of glass are in evidence, both opening to the outside and in inner service compartments.

Floors are mostly in linoleum of neutral colors, and wide, spacious, well-lit hallways are equipped with side rails for the convenience of patients and to prevent the bumping of food and medical carts in passage.

The 22,200 square feet of floor area allows space for 22 rooms, 30 beds, laboratory, x-ray, physical therapy, occupational therapy, examining rooms and other needs.

The project has been financed through Mrs. Stringfellow's endowment in conjunction with funds coming through the Hill-Burton Act. Two charity beds will be maintained, in keeping with Mrs. Stringfellow's will.

Applications are now being received for patients requiring long-term hospitalization and must be completed jointly with the attending physician. Evidence of financial responsibility is required with the application form. No age limit has been set.

FORAND BILL

(Guest Editorial, January, 1958 Bulletin, Omaha-Douglas County, (Nebraska) Medical Society.)

H. R. 9467 was introduced into the last session of Congress by Rep. Aime Forand (Dem. R. I.). It represents the second major extension of compulsory Social Security, an act which forms the foundation of the Welfare State, U. S. A. The first extension was H. R. 7225 which makes disabled persons past 50 years of age eligible for Federal Social Security benefits.

The Forand bill provides for hospitalization and specified surgical benefits, if the surgical services are performed by a Board-certified surgeon or a member of the College of Surgeons. (A nice built-in method of creating a schism in the medical profession.)

About 13,000,000 Americans will be eligible for its benefits and it will be financed by all persons who are now on Social Security rolls, with the employee and the employer each paying an additional 2 to 3 per cent tax. Thus, the total Social Security contribution will be about 9½ per cent of the earned income subject to Social Security tax. It also provides an increase of this earned income subject to Social Security tax from \$4,200 to \$6,000 per year.

If this bill should become law, socialism in the United States will be assured because it is estimated that, within 25 years, 30 to 40,000,000 Americans will be dependent upon the government for their health care and practically all persons will receive Social Security checks. The Marxian philosophy of individual dependence upon the central government will have been adopted through the democratic processes of a Republic. No wonder Khrushchev recently stated that war and revolution were no longer necessary to achieve the objectives of Communism.

Organized medicine has much more at stake than the fear of professional regimentation under socialized medicine. Organized medicine must fear the ravages of all of the evils of socialism in a totalitarian state.

The medical profession represents an informed group of professional persons who not only know that health care under a regimented system of government control soon deteriorates into an impersonal, unsympathetic, trade-like service, but it also knows, as a body of responsible citizens, that the passage of the Forand Bill would mean the destruction of the last vestige of individual responsibility. By this I mean that our enormous

Serving on the hospital board of trustees are J. G. H. Morris, chairman, and Drs. N. T. Davie, Hugh Gray and James Meigs. Other board members are Walker Reynolds, Mrs. W. P. Acker, Mrs. E. D. King, Hal Martin, Mrs. Fred Clark, Mrs. A. J. Goodwin, Mrs. T. E. Kilby, John B. Lagarde and G. L. King—From The Anniston Star, Jan. 12, 1958.

INVESTORS BEWARE

Chairman Edward N. Gadsby of the Securities and Exchange Commission, Washington, D. C., has announced that, at the Commission's request, some 40,000 copies of an "Investors Beware" poster are being placed on the bulletin boards of all post-offices, classified stations, and branches in the United States.

The purpose of the poster is two-fold: (1) to alert the investing public to the risks involved in the purchase of securities in reliance on tips and rumors and from unknown, high-pressure telephone salesmen; and (2) to encourage investors to cooperate in the Commission's law enforcement program by bringing to its attention information regarding the offering and sale of securities which may violate the registration requirement or the fraud prohibitions of the Federal Securities Laws. The information may be supplied to the Commission's home office in Washington or to any of its regional and branch offices in Atlanta, Boston, Chicago, Cleveland, Denver, Detroit, Fort Worth, Los Angeles, New York, Salt Lake City, San Francisco, Seattle, St. Paul, and Washington.

The poster warns investors to "Protect Yourself" by observing the following ten-point guide to safer investments:

1. Before buying Think!
2. Don't deal with strange securities firms. (Consult your broker!)
3. Beware of securities offered over the telephone by strangers.
4. Don't listen to high-pressure sales talk.
5. Beware of promises of spectacular profits.
6. Be sure you understand the risks of loss.
7. Don't buy on tips and rumors Get all the facts!
8. Tell the salesman to: Put all the information and advice in writing and mail it to you Save it!
9. If you don't understand all the written information Consult a person who does.
10. Give at least as much consideration to buying securities as you would the purchase of any valuable property.

inheritance tax places in the hands of the government the right to distribute a substantial part of our personal lifetime earnings to those in whom we have no personal interest or who do not deserve such a gratuity; our confiscatory income tax destroys any possibility of accumulating enough wealth which could be used as risk capital, the means by which this nation has developed the highest standard of living of any nation in the world; and now the proposed expanded Social Security Act will soon make the government largely responsible for the health care of this nation, as well as the custodian of the "savings" program for all of its citizens, a program which, because of its compulsory nature, is based on the thesis that Americans are incapable of taking care of themselves.

What to do? Organized medicine has done poorly in the national political ring. It has won only one major national political battle, the defeat of the Wagner-Murray-Dingell Bill in 1948. It immediately broke training after that victory and has not won a bout since. The worst defeat was the acceptance of the principle that Health, Education, and Welfare are close relatives and should be combined under one cabinet post. Oscar Ewing could not have done it better because all one needs to create a welfare state is control of education and health. Bismarck, Lloyd George, and Lenin all proved that.

We must revitalize the force which was mobilized to defeat the Wagner-Murray-Dingell Bill. We must join forces with enlightened groups such as the U. S. Chamber of Commerce and our numerous voluntary insurance carriers in the United States. We must tell the American people that they are selling their birthright for a mess of pottage. And, finally and most important of all, we must make an all-out effort to analyze the health needs of the aging in order to provide on a voluntary but individual basis for the deficiencies which are present.

PROGRAM TO INCREASE SCIENTISTS

A new program to increase the number of trained scientists for research and academic careers in fields of basic importance to health has been announced by the Public Health Service.

Designed to provide aid for graduate level training in medical schools, universities, and other qualified training institutions, the new program is to be financed through the Service's National Institutes of Health and will be known as the "General Research Training Grants Program."

"Additional trained research personnel is badly needed," said Dr. James A. Shannon, Director of the Institutes, "in such shortage areas as pathology, pharmacology, genetics, anesthesiology, epidemi-

ology, biometry, biochemistry, biophysics, and others from which will come new basic knowledge vital to the conquest of disease.

"This new program of grants to institutions extends and supplements, but does not replace, the research training opportunities available through our regular research fellowship awards to promising individuals."

The program is financed through funds appropriated by Congress to the Institutes for training grants during the current fiscal year. Existing funds will be used to focus aid upon training in the basic sciences where there are recognized major shortages of research personnel.

Institutions receiving funds under the new program will select and appoint individuals for predoctoral and postdoctoral training. The institutions will determine stipends to be paid. They are not restricted to a set pattern in developing training, but may propose programs of any nature which reflect research training needs as seen by the institutions and which provide the best utilization of their facilities.

The "General Research Training Grants Program" will be administered by the Division of Research Grants of the National Institutes of Health. Institutions wishing further information, including application forms and instructions, may obtain them by writing to the Chief, Research Training Branch, Division of Research Grants, National Institutes of Health, Bethesda 14, Maryland.

NEED FOR ACCREDITING NURSING HOMES

The need for accrediting nursing homes and other institutions providing care for chronically ill patients is so acute that unless a voluntary program is established government will fill the void, according to the director of the Joint Commission on Accreditation of Hospitals.

Dr. Kenneth B. Babcock, director of the Joint Commission, discussed accreditation developments during the five years since the founding of the Commission in an interview published in a recent issue of *Hospitals*, Journal of the American Hospital Association.

Answering a question on the priority of establishing an accreditation program for nursing home and chronic care facilities, Dr. Babcock said, "It would have topmost priority as a need. I am unwilling to say the Joint Commission on Accreditation is the vehicle which should do it.

"The problem is so pressing that if voluntary agencies, like the member organizations of the Joint Commission, do not take it over, the government is going to have to," he said.

Doctor Babcock pointed out that "The idea of better quality health care in our communities

through surveying of every facet of care, whether it be domiciliary or actual clinical medical care, is an important one."

Pointing out that the standards of the Joint Commission are "a floor, not a ceiling," Doctor Babcock said that the future program of the Commission will undoubtedly include "a tightening of the present standards and an increase in the standards to the extent that it may be harder to become accredited than it has been in the past."

The Joint Commission on Accreditation of Hospitals in a voluntary program surveys hospitals and accredits them, providing they meet specified standards of patient care. The Joint Commission is sponsored by the American College of Physicians, the American College of Surgeons, the American Hospital Association, the American Medical Association, and the Canadian Medical Association.

MEETINGS

AMERICAN ACADEMY OF GENERAL PRACTICE

What are the emotional and physical problems of today's teen-ager? Can hypnosis cure headaches? What causes dizziness? These and countless other current questions will be answered at the American Academy of General Practice Tenth Annual Scientific Assembly March 24-27 in Dallas' Memorial Auditorium.

The scientific program will feature 35 prominent physician-authorities. Ninety scientific and 300 technical exhibits will be prepared for the 7,000 doctors and guests expected to attend. The Academy, second largest medical association in the country and the only American medical organization composed of family physicians, is presenting its scientific assembly in combination with the Dallas Southern Clinical Society.

Mac F. Cahal, executive secretary of the 23,000-member organization, says the 1958 scientific program will undoubtedly be the outstanding postgraduate education opportunity of the year for physicians.

CARDIOVASCULAR SEMINAR

The annual Cardiovascular Seminar sponsored by the Mississippi Heart Association and the University of Mississippi School of Medicine will be held at the University Medical Center in Jackson April 2-4, 1958.

The five-person guest faculty includes: Henry T. Bahnson, M. D., associate professor of surgery, Johns Hopkins University School of Medicine; Louis N. Katz, M. D., director, Department of Cardiovascular Research, Michael Reese Hospital; John H. Moyer, M. D., professor of internal medi-

cine and chairman of the department, the Hahnemann Medical College and Hospital, Philadelphia; Catherine A. Neill, M. D., assistant professor of pediatrics, Johns Hopkins University School of Medicine, and Conger Williams, M. D., instructor in medicine, Harvard University School of Medicine.

Dr. Neill will lecture on pulmonary complications in congenital heart disease, and diagnosis and management of congestive heart failure in infants. Dr. Williams will speak on pericardial disease and differential diagnosis of anginal pain, which will also be covered by Dr. Moyer. The latter's other lectures will be on hypertensive disease.

Dr. Bahnson has scheduled three talks covering aneurysm surgery and open heart surgery, while Dr. Katz will speak on April 2 and 3 only, taking clinical application of recent advances in atherosclerosis and mechanisms and value of certain signs of congestive heart failure as his subjects.

The annual Mississippi Heart Association dinner meeting and election of officers will be held on April 2 with the dinner speaker yet to be announced.

Somewhat shorter and perhaps faster paced than the five-day program offered last year, the 1958 seminar is planned for the needs of the family physician as suggested by replies to a 1957 post-seminar questionnaire. It is anticipated that the 1959 program will be keyed to the specialist. Attendance will be accepted for 20 hours Category 1 credit by the Academy of General Practice.

J. Manning Hudson, M. D., clinical instructor in medicine at the University Medical Center, is in charge of the seminar in his capacity as professional education chairman of the Mississippi Heart Association of which he is also state vice-president.

THE AMERICAN CONGRESS OF PHYSICAL MEDICINE AND REHABILITATION

The 36th annual scientific and clinical session of the American Congress of Physical Medicine and Rehabilitation will be held August 24-29, 1958, inclusive, at the Bellevue Stratford Hotel, Philadelphia.

Scientific and clinical sessions will be given August 25, 26, 27, 28, and 29. All sessions will be open to members of the medical profession in good standing with the American Medical Association.

Full information may be obtained by writing to the Executive Secretary, Dorothea C. Augustin, American Congress of Physical Medicine and Rehabilitation, 30 North Michigan Avenue, Chicago 2, Illinois.

AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY

The next scheduled examinations (Part II), oral and clinical for all candidates eligible, will be conducted at the Edgewater Beach Hotel, Chicago, Ill., by the entire Board from May 7 through 17, 1958. Formal notice of the exact time of each candidate's examination will be sent him in advance of the examination dates.

Candidates who participated in the Part I examinations will be notified of their eligibility for the Part II examinations at the earliest possible date.

Current Bulletins of this Board may be obtained by writing to Robert L. Faulkner, M. D., 2105 Adelbert Rd., Cleveland 6, Ohio.

ILLINOIS STATE MEDICAL SOCIETY SPONSORS
POST AMA MEETING HAWAIIAN TOUR

A wonderful, colorful trip to the Hawaiian Islands has been planned in connection with the annual meeting of the American Medical Association in San Francisco in June. The journey will be sponsored by the Illinois State Medical Society for the benefit of its members and their families, but other physicians and their families are being invited to join the group.

The party will leave by air from San Francisco the night of June 26 and arrive in Honolulu the following morning. The members will be greeted in true Hawaiian style, and then driven to the magnificent Royal Hawaiian Hotel, known the world over for its romantic setting, superb accommodations, excellent meals and exceptional service.

The next week will be a continuous round of pleasures and sightseeing. The program will include a drive to Punchbowl Crater, the national cemetery of the Pacific; a trip to the summit of Mt. Tantalus; a tour of Pearl Harbor for a view of Battleship Row; a drive to historic Hickam Field; a luau or native feast at the beautiful Queen's Surf, and a tour of other Hawaiian Islands. Several days will be left open to enjoy the white sands of Waikiki Beach and the lazy luxury of a tropical paradise.

For physicians who wish to learn something about medicine in the Islands there will be a Hawaiian Summer Medical Conference in Honolulu, July 1-3.

Participants in the tour will leave Honolulu, July 5, and have the option of returning to the Mainland overnight by air or on the luxurious air-conditioned S. S. Lurine. Those taking the boat will be treated to five days of additional enjoyment, and arrive in Los Angeles, July 10.

A descriptive brochure, with complete informa-

tion, may be had by writing to Mr. W. M. Moloney, vice-president of the Harvey T. Mason Travel Company, Inc., Professional Building, "Old Orchard," Skokie, Illinois.

PAN AMERICAN MEDICAL WOMEN'S ALLIANCE

The Pan American Medical Women's Alliance is having its Sixth Congress in Miami, Florida, April 14-17, 1958, with headquarters at the McAllister Hotel.

All women doctors are invited, and women are expected not only from the United States and Canada but also from Mexico and the Latin American Countries.

"The purpose of this Alliance is to bring the medical women of North, South, and Central America, and the Caribbean area into an association with each other for mutual improvement, encouragement for their participation in all branches of medical public welfare; for the exchange of ideas and of improved treatment to facilitate social and cooperative relations; to assist in the further education of its members through exchange fellowships and loans; and to generally forward such constructive movements as may be mutually beneficial and/or properly endorsed by the medical associations for our several countries."

Insecticide Residue May Cause Poisoning—More attention should be given to the possibility of poisoning from residues left on plants after they have been dusted with insecticides, two West Coast researchers said recently.

This was reported in an article written for the February 15 Journal of the American Medical Association by Dr. Griffith E. Quinby, of Wenatchee, Wash., and Allen B. Lemmon, A.B., of Sacramento, Calif.

The warning of the danger from residues was advanced after the team studied a number of outbreaks over a six-year period of parathion poisoning among crop workers who entered fields shortly after the crops had been dusted with the chemical.

"Previously, due to the limited number of published reports of poisoning by residues, doctors have tended to insist on a history of direct exposure to sprays, concentrates, or dusts before giving serious consideration to a diagnosis of parathion poisoning," the researchers said.

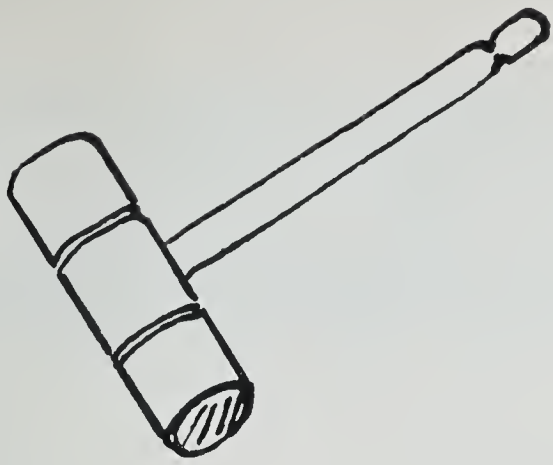
A striking difference exists between poisoning produced by direct exposure and that due to residues.

In cases of direct exposure it is unusual for more than one or two of those involved to become ill.

Large numbers of those exposed to residues have been known to be affected. This type is also considered to be more mild and the onset is more gradual.

The current study also points out that of those crops examined, all had foliage at least chest high. "This may imply that workers are poisoned in this way only when dusted or bathed in the dilute residues practically from head to foot," the report added.

In the majority of the cases, poisoning was detected within two days after the solution had been applied to the crops. There have been extreme cases of poisoning up to four weeks after exposure.



President's Page

A NEW VENTURE

At the April meeting of the Association a place will be made in the program for aspirants to the office of Governor of Alabama to address our Association and make known their views of problems confronting us and the State Health Department. As individuals, many members of our Association have actively participated in political campaigns. This is the first time our Association has sought expression from office seekers before an election. It seems to me a step in the right direction. The legislative committee of our Association has suggested this move as a means of having better effect in our attempt to influence legislation we favor.

It should be interesting to the members of our Association, as well as the political aspirants themselves, to see how this new venture works out. Certainly no group in any community is more aware of the needs of good medical and public health facilities than the physicians who work in the community. Likewise, on a state level our thinking should be equally as important and effective.

By legislation we are the guardians of the type of medical care our citizens receive in this state, as well as carrying on necessary public health activities. It behooves us to be aware in advance of the attitudes of those seeking state office. Many of our problems in the Legislature in the past could have been simplified had this program been in operation before.

The next problem will be our plan of action after these candidates have appeared before our Association. Will this be the beginning of a political influence as an Association rather than as individuals? The body politic of our state has been seriously ill on many occasions and the wise counsel of our Association may be the influence

which restores a high standard of medical practice and public health which our people are entitled to. I hope members of our Association will listen well in April.

In politics it is most important to win the first race. There is an advantage in having the prestige of the power of an office. If, in our first venture as a political force, we make our influence felt and desired, it would increase our stature as a profession.



It would not be amiss at this point to bring up a problem which might have to be seriously considered at the county level in the near future. It is the question of "medical convenience" versus "medical necessity." The great majority of home calls are medical convenience. The American people are spoiled to conveniences even to the point of having a cold Coca-Cola brought to their living room from the nearby drug store. Medicine as taught in our schools today cannot be practiced in homes. The hospital has become an essential part of the community. How to practice medicine without home calls and how to keep hospitals from starting the practice of medicine need to be considered now.



The committees of our Association have done valuable work during the past year. They should be commended by the Association and there will be wisdom in their recommendations at our next meeting.



ORGANIZATION SECTION

PROGRAM OF THE ANNUAL SESSION OF THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA MONTGOMERY

APRIL 17, 18, 19, 1958

WHITLEY HOTEL

GENERAL INFORMATION

All sessions of the Association and exhibits will be at the Whitley Hotel, convention headquarters—the sessions in the Blue and Gray Room, the exhibits in the State Room.

The maximum time consumed by essayists should not exceed twenty minutes. This time limit, however, does not apply to invited guests. It is suggested that the salient features of papers be presented within this time, reserving the complete elaboration for publication in the Journal of the Association.

All papers read before the Association should be deposited with the Secretary when read; otherwise, their publication may be delayed.

Papers will be called in the order in which they appear on the program. Should the reader be absent when called, his paper will be passed, and called again when the program is concluded.

REGISTRATION

The registration desk will be on the lobby floor of the hotel. Be sure to register.

THE FIFTY YEAR CLUB

According to custom, physicians who graduated fifty years ago will be honored by the Association at this meeting. Their names appear in the program.

HOST TO THE ASSOCIATION

The Montgomery County Medical Society

OFFICERS

Thomas S. Boozer, *President*
H. Leon Rosen, *Vice-President*
William L. Smith, *Secretary-Treasurer*

BOARD OF CENSORS

W. A. Daniel, Jr., *Chairman*
Paul Mertins, *David B. Monsky*
J. Cobb Laslie, *C. S. Stickley*

COMMITTEES

Luther Hill, *General Chairman*
Joseph W. Perry, *Co-Chairman*

Hotel

H. Leon Rosen, *Chairman*
Warren G. Shuman, *Co-Chairman*
Robert T. Ashurst, *H. H. Hutchinson*
Thurston D. Rivers

Scientific Exhibits

Truett Jackson, *Chairman*
James H. French, *Co-Chairman*
David E. Dunn, Jr., *Elmer J. Kocour*
Irl R. Long, *William F. Reynolds*
Julian L. Wishik

Commercial Exhibits

Haynes Byrne, *Chairman*
Francis M. Thigpen, *Co-Chairman*
Hugh C. MacGuire, *William M. Brock*
Philip K. Burwell, *Jack Wool*

Transportation

William R. Britton, *Chairman*
Harry J. Till, *Co-Chairman*
George T. Bradford, *William U. Cawthon*
Boude B. Leavel

Motion Pictures, Lights, Microphones and Lantern Slides

W. A. Daniel, Jr., *Chairman*
M. V. Parker, *Co-Chairman*
Robert L. Draughon, *Edwin L. Webb*

Publicity

Elias N. Kaiser, *Chairman*
William Waller, *Co-Chairman*
William B. Crum, *Richard A. Harris*
J. Cobb Laslie, *Nace R. Cohen*
William B. Virgin

Hospital Visitation

John M. Cameron, *Chairman*
Sim Penton, *Co-Chairman*
Willard D. Bennett, *William P. Lochte*
Bernell F. Dorrough, *William P. May*
Albert S. Zdanis

PROGRAM OF THE ANNUAL SESSION

Entertainment

Archie E. Thomas, *Chairman*
John Allen Jones, *Co-Chairman*
Ernest P. Jabour Robert R. McBryde
Thomas H. Williams, Jr.

Reception

T. Brannon Hubbard, Sr., *Chairman*
Karl B. Benkwith, *Co-Chairman*
Harris P. Dawson Daniel S. Hagood
David B. Monsky Hinton W. Waters, Jr.

Finance

Robert Parker, *Chairman*
John W. Davis, Jr., *Co-Chairman*
Haynes Byrne Harry Glazer
John F. Wade

OFFICERS OF THE ASSOCIATION

President

John A. Martin.....Montgomery

President-Elect

Edgar G. Givhan, Jr.....Birmingham

Vice-Presidents

Hugh E. Gray.....Anniston
S. W. Windham.....Dothan
William D. Anderson.....Tuscaloosa
E. L. Strandell.....Brewton

Secretary-Treasurer

Douglas L. Cannon.....Montgomery

Executive Secretary

W. A. Dozier, Jr.....Montgomery

Executive Assistant

W. V. Wallace.....Montgomery

The State Board of Censors

E. V. Caldwell, Chm.....Huntsville
J. G. Daves.....Cullman
John L. Branch.....Montgomery
J. O. Finney.....Gadsden
E. G. Givhan, Jr.....Birmingham
G. O. Segrest.....Mobile
John W. Simpson.....Birmingham
J. Paul Jones.....Camden
Robert Parker.....Montgomery
J. P. Collier.....Tuscaloosa

State Health Officer

D. G. Gill.....Montgomery

Delegates and Alternates to the American Medical Association

Delegate—E. Bryce Robinson, Jr.....Fairfield
Alternate—B. W. McNease.....Fayette
(Term: January 1, 1957—December 31, 1958)
Delegate—J. Paul Jones.....Camden
Alternate—D. G. Gill.....Montgomery
(Term: January 1, 1958—December 31, 1959)

PROGRAM

First Day, Thursday, April 17

Blue and Gray Room

Whitley Hotel

Morning Session

9:00 A. M.

Call to order by the President—
John A. Martin, *Montgomery.*

Invocation—

Reverend William J. Lineback, *Minister, First Christian Church, Montgomery.*

Addresses of Welcome—

Hon. W. A. Gayle, *Mayor, City of Montgomery.*
Thomas S. Boozer, *President, Montgomery County Medical Society.*

PART I

REPORTS OF STANDING COMMITTEES

1. Public Relations—
J. Michaelson, *Chairman.*
2. Medical Education and Hospitals—
W. B. Frommeyer, Jr., *Chairman.*
3. Medical Care For Industrial Workers—
E. Bryce Robinson, *Chairman.*
4. Insurance—
J. O. Morgan, *Chairman.*
5. Finance—
Hugh Gray, *Chairman.*
6. Constitution and By-Laws—
W. R. Carter, *Chairman.*
7. Indigent Care—
J. Paul Jones, *Chairman.*
8. Legislation—
M. Vaun Adams, *Chairman.*
9. Rural Health—
Paul Nickerson, *Chairman.*
10. Emergency Medical Service—
J. Mac Barnes, *Chairman.*
11. Veterans Affairs—
J. P. Mudd, *Chairman.*
12. Maternal and Child Health—
Hughes Kennedy, Jr., *Chairman.*
13. Cancer Control—
W. N. Jones, *Chairman.*
14. Mental Hygiene—
Jack Jarvis, *Chairman.*
15. Tuberculosis and Chronic Pulmonary Diseases—
R. K. Oliver, *Chairman.*
16. Publishing Committee—
Douglas L. Cannon, *Chairman.*

SPECIAL COMMITTEES

1. American Medical Education Foundation—
H. G. Hodo, *Chairman.*
2. Blue Cross-Blue Shield—
H. S. Bartlett, *Chairman.*
3. A. M. A. Program Evaluation—
E. M. Moore, *Chairman.*
4. Building Committee—
Luther Hill, *Chairman.*

PROGRAM OF THE ANNUAL SESSION

REPORTS OF OFFICERS

Secretary-Treasurer—

Douglas L. Cannon, Montgomery.

Executive Secretary—

W. A. Dozier, Jr., Montgomery.

Vice-Presidents—

(1) Northeastern Division

Hugh Gray, Anniston.

(2) Southeastern Division

S. W. Windham, Dothan.

(3) Northwestern Division

W. D. Anderson, Tuscaloosa.

(4) Southwestern Division

E. L. Strandell, Brewton.

The President's Message—

John A. Martin, Montgomery

PART II

SCIENTIFIC PROGRAM

1. *Studies in Man on the Metabolic Response to Stress—*
RICHARDSON HILL, JR.,
Birmingham, Alabama.
2. *Diabetes in Childhood—*
ALLAN M. BUTLER,
Professor of Pediatrics,
Harvard Medical School,
Boston, Massachusetts.
3. *Obstetric Emergencies—*
JOHN H. RANDALL,
Professor of Obstetrics and Gynecology,
University of Iowa,
Iowa City, Iowa.
4. *Perforations of the Small Bowel Producing an Acute
Abdomen With Special Reference to Lymphosarcoma
as Its Etiology—*
SAMUEL W. WINDHAM,
Surgeon,
Dothan, Alabama.



Afternoon Session

Thursday, April 17

2:00 P. M.

1. *Spontaneous Intracerebral Hematomas, Their Causes
and the Surgical Treatment—*
WILLIAM B. PATTON,
Neurosurgeon,
Mobile, Alabama.
2. *Common Cardiac Arrhythmias—*
J. MAC BARNES,
Internist,
Montgomery, Alabama.
3. *Some Effects of General Anesthetic Agents on the
Circulation—*
DAVID A. DAVIS,
Professor, Department of Anesthesiology,
Univ. of N. C. School of Medicine,
Chapel Hill, North Carolina.
4. *Evaluation of the Papanicolaou Smear Technique to
Determine Early Cancer of the Uterus—A Review of
the Literature With Particular Reference to the Of-
fice of the General Practitioner—*
JULIUS MICHAELSON,
General Practitioner,
Foley, Alabama.

5. *The Diagnosis and Treatment of Intraoral Tumors—*
JAMES W. HENDRICK,
Eye, Ear, Nose and Throat,
Tuscaloosa, Alabama.
6. *Musculoskeletal Manifestations of Malignant Dis-
ease—*
ROBERT S. HOGAN,
Internist,
Birmingham, Alabama.
7. *The Role of the Doctor in Atomic Fallout—*
DAVID I. LIVERMORE,
Gunter Air Force Base,
Montgomery, Alabama.



Second Day, Friday, April 18

Morning Session

Blue and Gray Room

9:00 A. M.

1. *The Recognition of Accessible Cancer—*
HARRY W. SOUTHWICK,
Clinical Associate Professor of Surgery,
University of Illinois College of Medicine,
Chicago, Illinois.
2. WILLIAM CRAWFORD GORGAS AWARD.
3. *The Legal and Medical Profession in Court—*
JUDGE WALTER B. JONES,
Lawyer,
Montgomery, Alabama.
4. RECOGNITION OF THE FIFTY YEAR CLUB.
5. THE JEROME COCHRAN LECTURE:
What Should We Ask of Psychiatry?—
R. C. ANDERSON,
Commissioner, State of Ohio Department of Mental
Hygiene and Correction,
Columbus, Ohio.
6. ANNOUNCEMENT OF VACANCIES IN THE COLLEGE OF COUN-
SELLORS.
7. Meeting of Counsellors and Delegates for the Pur-
pose of Making Nominations to Fill Vacancies in the
College of Counsellors.



Afternoon Session

Friday, April 18

2:00 P. M.

1. *Extra-Cellular Fluid—*
LUTHER HILL,
Surgeon,
Montgomery, Alabama.
2. *Lymphoma—*
VINCENT P. COLLINS,
Professor and Chairman, Department of Radiology,
Baylor University College of Medicine,
Houston, Texas.
3. *Convulsions in Children—*
DANIEL F. SULLIVAN,
Pediatrician,
Mobile, Alabama.
4. Introduction of Fraternal Delegates.
5. Introduction of Gubernatorial Candidates.

PROGRAM OF THE ANNUAL SESSION

Last Day, Saturday, April 19

Blue and Gray Room

9:00 A. M.

Business Meeting of the Association sitting as the Board of Health of the State of Alabama:

- (1) Report of the Board of Censors;
- (2) Revision of the Rolls:
 - (a) County Societies,
 - (b) Counsellors,
 - (c) Correspondents;
- (3) Election and Installation of Officers.

Adjournment

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OTHER ITEMS

THE FIFTY YEAR CLUB

Class of 1958

(To whom Certificates of Distinction will be awarded on Friday morning immediately before the Jerome Cochran Lecture.)

Benjamin F. Anderson	Sellers
John R. Armistead	Prichard
Shelby L. Burdeshaw	Headland
Rush P. Burke	Montgomery
Stephen S. Busby	Hamilton
Thomas D. Cloyd	Florence
William L. Cowles	Lanett
Edgar W. Daly	Birmingham
Charles A. Donnelly	Birmingham
Jesse E. H. Edwards	McCalla
Charles M. Gross	Cullman, Rt. 3
Murray C. Hollis	Winfield
John C. Hope, Sr.	Mobile
Curtis A. Hunsaker	Birmingham
Benjamin F. Jackson, Sr.	Montgomery
Columbus A. Jackson	York
George A. Johnson	Montgomery
Frank J. Lee	Luverne
Wade A. Martin	St. Petersburg, Fla.
Claude C. McLean	Birmingham
William R. Moore	Florence
Allen E. Orton	Bessemer
J. Ullman Reaves	Mobile
William H. Riser	Lafayette
Harry P. Shugerman	Birmingham
William R. Snow	Jasper
Ross C. Speir	Birmingham
Clarence C. Wiley	Birmingham

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VACANCIES IN THE COLLEGE OF COUNSELLORS

The following vacancies in the College of Counsellors will present at this meeting of the Association:

1st Congressional District—2. Under reapportionment of Counsellors by the State Board of Censors, the district is allotted a counsellorship to which it is entitled. W. T. Cocke has resigned.

2nd Congressional District—1. John L. Branch's second term of seven years has expired.

3rd Congressional District—2. H. S. Holloway's first term of seven years has expired. J. Ralph Morgan's second term of seven years has expired.

5th Congressional District—2. The second terms of seven years of R. A. Foshee and A. C. Gipson have expired.

6th Congressional District—1. W. C. Golden's second term of seven years has expired.

7th Congressional District—2. R. B. Dodson's second term of seven years has expired. M. C. Hollis' first term of seven years has expired.

9th Congressional District—5. The second terms of seven years of H. W. Allgood and D. C. Donald have expired. Under reapportionment of Counsellors by the State Board of Censors, the district is allotted three counsellorships to which it is entitled.

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OTHER EVENTS

The Alabama Association of Obstetricians and Gynecologists

Montgomery Country Club

Pine Room

April 16, 1958

9:00 A. M. Registration.

9:30 A. M. Business Meeting and Election of Officers.

10:30 A. M. Elliott J. Scarbrough, M. D., Atlanta, Georgia—*Carcinoma of Cervix*.

11:30 A. M. John H. Randall, M. D., Iowa City, Iowa—*Induction of Labor*.

12:30 P. M. Luncheon Round Tables.

Discussion of obstetric mortalities in the state of Alabama during 1957. All names are anonymous. (Physician, patient and otherwise.) All members of the Medical Association of the State of Alabama are invited to participate in these forums.

A. Thomas M. Boulware, M. D., Birmingham—*Hemorrhage*.

B. S. U. Newfield, M. D., Birmingham—*Toxemia*.

C. John C. Hope, M. D., Mobile—*Infection*.

D. James H. French, M. D., Montgomery—*Vascular Accidents, Anesthesia, and Other Causes*.

2:00 P. M. Elliott J. Scarbrough, M. D., Atlanta Georgia—*Carcinoma of Vulva, Body of Uterus and Adnexa*.

3:00 P. M. John H. Randall, M. D., Iowa City, Iowa—*Placental Insufficiency*.

4:00 P. M. Consultation Hour.

Panel: John H. Randall, M. D., Elliott J. Scarbrough, M. D., Robert A. Ross, M. D.

Discussion of addresses, questions and answers. Audience heartily requested to participate.

7:00 P. M. Social Hour.

Wives are invited.

8:00 P. M. Banquet.

Speaker—Robert A. "Daddy" Ross, M. D., University of North Carolina, Chapel Hill, North Carolina

PROGRAM OF THE ANNUAL SESSION

All members of the Medical Association of the State of Alabama are welcome and invited to participate in this program.



Alabama Academy of General Practice

A dinner meeting of the Board of Directors of the Academy will be held at 6:00 P. M. on April 16 at the Whitley Hotel.



Alabama Chapter

American College of Chest Physicians

The Alabama Chapter of the American College of Chest Physicians will meet on April 16 at the Whitley Hotel. The scientific meeting will be followed by a social hour.



Alabama Section

International College of Surgeons

There will be a breakfast and business meeting of the International College of Surgeons at 7:30 A. M. on April 18. The place of the meeting will be announced and will appear in the final program.



Alabama Radiological Society

A luncheon meeting of the Alabama Radiological Society will be held at 12:30 P. M. on April 18 at the Whitley Hotel.



Alabama Orthopedic Society

The Alabama Orthopedic Society will meet on April 16 at 9:00 A. M. at St. Jude's Catholic Hospital. The program will be announced later.



Alabama Society of Anesthesiologists

Dr. David A. Davis, University of North Carolina Medical School, Chapel Hill, North Carolina will speak on "Anesthetic Problems in Neurosurgery" at the Alabama Society of Anesthesiologists meeting on April 16.



Alabama Pediatric Society

The annual meeting of the Alabama Pediatric Society will be held at 8:30 A. M. on April 16 at the Montgomery County Health Center, 515 West Jeff Davis Avenue, Montgomery. The following guest speakers will present subjects of pediatric interest: Dr. Ralph V. Platou, Professor of Pediatrics and Head of Department of Pediatrics, Tulane University School of Medicine, New Orleans, Louisiana, and Dr. Allan M. Butler, Professor of Pediatrics, Harvard Medical School and Chief of Children's Medical Service, Massachusetts General Hospital, Boston, Massachusetts. There will be a luncheon for wives of attending pediatricians at the Blue Moon Inn. Both physicians and wives will be invited to a banquet on the evening of April 16 at the Montgomery Country Club (Terrace Room). Detailed programs will be mailed to members of the Society at a later date.

SOCIAL EVENT

Members of the Association and their guests will be entertained at the Beauvoir Country Club of Montgomery on Thursday, April 17.

Social Hour—5:00 P. M.

Dinner—7:00 P. M.

Dance—9:00 P. M.



INDOCTRINATION OF NEW MEMBERS

The second annual Indoctrination Course for new members will be held from 12:00 to 1:30 P. M. on April 17. The place will be announced later. The program will begin with a luncheon—free to new members—followed by three speeches covering various aspects of the Association's work. Members who have joined the Association since April 1, 1957 are expected to attend.



TECHNICAL EXHIBITS

Concerns exhibiting at the meeting of the Medical Association of the State of Alabama, Montgomery, Alabama, April 17-19, 1958.

1. The Rhinopto Company
Dallas, Texas
2. Eli Lilly and Co.
Indianapolis, Ind.
3. McNeil Laboratories
Philadelphia, Pa.
4. Pet Milk Co.
St. Louis, Mo.
5. Abbott Laboratories
North Chicago, Ill.
6. The S. E. Massengill Co.
Bristol, Tenn.
7. E. R. Squibb and Sons
New York, N. Y.
8. Carroll Dunham Smith Pharmacal Co.
New Brunswick, N. J.
9. Parke, Davis and Co.
Detroit, Mich.
10. J. A. Majors Co.
Dallas, Texas
11. Mead Johnson and Co.
Evansville, Ind.
12. J. B. Roerig and Co.
New York, N. Y.
13. Sandoz, Inc.
Hanover, N. J.
14. Ames Company, Inc.
Elkhart, Ind.
15. U. S. Vitamin Corp.
New York, N. Y.
16. Table Rock Laboratories, Inc.
Greenville, S. C.
17. Merck Sharp & Dohme
Philadelphia, Pa.
18. Bodine-Bryson & Rolling
Birmingham, Ala.
19. Desitin Chemical Co.
Providence, R. I.
20. Carnation Co.
Los Angeles, Calif.
21. Pfizer Laboratories
Brooklyn, N. Y.
22. Eaton Laboratories
Norwich, N. Y.

PROGRAM OF THE ANNUAL SESSION

23. AGM Drug Company
Montgomery, Ala.
24. Durr Surgical Supply Co.
Montgomery, Ala.
25. G. D. Searle & Co.
Chicago, Ill.
26. King Pharmaceutical Co., Inc.
Montgomery, Ala.
27. A. H. Robins Co., Inc.
Richmond, Va.
28. Winthrop Laboratories
New York, N. Y.
29. A. S. Aloe Co.
New Orleans, La.
30. Coca Cola Bottling Co.
Montgomery, Ala.

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SCIENTIFIC EXHIBITS

Anyone who desires space for a scientific exhibit for the Annual Session of the Medical Association of the State of Alabama, Montgomery, April 17-19, is invited to write for information to Dr. Truett Jackson, 1235 Forest Avenue, Montgomery, Alabama, or Dr. James H. French, 339 South Ripley Street, Montgomery, Alabama.

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PROGRAM OF THE WOMAN'S AUXILIARY TO THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA Jefferson Davis Hotel April 17-18, 1958

OFFICERS

President

Mrs. William Noble.....Ft. Payne

President-Elect

Mrs. H. Leon Rosen.....Montgomery

Vice-Presidents

Mrs. Weldon Ray.....Bessemer

Mrs. W. T. Burkett.....Dothan

Mrs. Herman Frank.....Gadsden

Mrs. William E. Purvis, III.....Mobile

Recording Secretary

Mrs. Kermit Pitt.....Decatur

Corresponding Secretary

Mrs. Philip Fagan.....Anniston

Treasurer

Mrs. George Newburn.....Mobile

Finance Officer

Mrs. J. R. Chandler.....Magnolia Springs

Auditor

Mrs. Charles Terry.....Mobile

Historian

Mrs. Arthur M. Freeman.....Birmingham

Parliamentarian

Mrs. N. T. Davie.....Anniston

Directors

Mrs. William G. Thuss.....Birmingham

Mrs. John Holley.....Florala

Mrs. Wilbur M. Salter.....Anniston

COMMITTEE CHAIRMEN

A. Sponsored by Woman's Auxiliary, American Medical Association

American Medical Education Foundation—Mrs. J. O. Brooks, Hamilton.

Bulletin—Mrs. J. M. Kimmey, Elba.

Civil Defense—Mrs. I. W. Bankston, Scottsboro.

Legislation—Mrs. Paul Shannon, Birmingham.

Mental Health—Mrs. Robert L. Tourney, Birmingham.

Nurse Recruitment—Mrs. J. T. Morris, Cullman.

Organization—Mrs. H. Leon Rosen, Montgomery.

Program—Mrs. Marston T. Hunt, Boaz.

Public Relations—Mrs. J. O. Morgan, Sr., Gadsden

Safety—Mrs. Edwin Couch, Winfield.

Today's Health—Mrs. W. A. Cunningham, Birmingham.

B. Sponsored by Woman's Auxiliary, Southern Medical Association

Councilor to Southern—Mrs. John Chenault, Decatur.

Doctor's Day and Research and Romance of Medicine—Mrs. John Chenault, Decatur.

C. Sponsored by Woman's Auxiliary, Medical Association of the State of Alabama

Archives and Exhibits—Mrs. L. H. Clemmons, Cullman.

Lettie Daffin Perdue Scholarship—Mrs. C. M. Warren, Mobile.

Members-at-Large—Mrs. E. F. Leatherwood, Hayneville.

Co-Chairman—Mrs. J. A. Sherrod, Hayneville.

Memorial—Mrs. W. J. Rosser, Birmingham.

Newsletter—Mrs. B. F. Austin, Montgomery.

Press and Publicity—Mrs. George Peters, Montgomery.

Revision—Mrs. B. B. Kimbrough, Mobile.

Rural Health—Mrs. C. P. St. Amant, Jr., Atmore.

Yearbook—Mrs. George W. Gibbins, Anniston.

Nominating—Mrs. John Holley, Florala.

Essay Contest—Mrs. Fred Smith, Huntsville.

Handbook—Mrs. John Chenault, Decatur.

Co-Chairman—Mrs. N. T. Davie, Anniston.

D. For Convention

Chairman—Mrs. Frank Riggs, Montgomery.

Co-Chairman—Mrs. Cobb Laslie, Montgomery.

Credentials—Mrs. W. L. Smith, Montgomery.

Registration and Reservation—Mrs. R. M. Lightfoot, Montgomery.

Social—Mrs. J. M. Barnes, Montgomery.

Flowers—Mrs. J. L. Branch, Montgomery.

Hospitality—Chairman, Mrs. D. G. Gill, Montgomery.

Co-Chairmen, Mrs. Robert Parker, Montgomery,

Mrs. W. A. Gunter, Montgomery.

Tickets—Mrs. A. E. Thomas, 133 Arlington Rd., Montgomery.

Entertainment—Mrs. H. S. Bartlett, Montgomery.

PROGRAM OF THE ANNUAL SESSION

Archives and Exhibits—Chairman, Mrs. L. H. Clemmons, Cullman.
Co-Chairman, Mrs. J. T. Morris, Cullman.
Press and Publicity—Mrs. George Peters, Montgomery.



Thursday, April 17

8:30-4:30—Registration.

9:00 A. M.—Preconvention Executive Board Meeting, Mrs. William Noble, President, Presiding, Jefferson Davis Hotel.

1:00 P. M.—Dutch Luncheon (\$1.50), Jefferson Davis Hotel, Mrs. William Noble, Presiding.

Honoring Mrs. Paul C. Craig, President, Woman's Auxiliary to the American Medical Association and Mrs. Walker L. Curtis, President, Woman's Auxiliary to the Southern Medical Association, College Park, Georgia.

Invocation.

Welcome—Mrs. Cobb Laslie, Montgomery.

Response—Mrs. R. J. Guest, Fort Payne.

Greetings from the Medical Association of the State of Alabama—Dr. John A. Martin, Montgomery.

Greetings from Woman's Auxiliary to the Southern Medical Association—Mrs. Walker L. Curtis, College Park, Georgia.

Address—Mrs. Walker L. Curtis, College Park, Georgia.

2:30 P. M. First General Session, Jefferson Davis Hotel.
Call to Order—Mrs. William Noble, President, Fort Payne.

Invocation—Mrs. J. G. Daves, Cullman.

Membership Pledge.

Welcome—Mrs. William Noble, Fort Payne.

Introduction of Guests—Mrs. William Noble, Fort Payne.

Convention Rules of Order—Mrs. Cobb Laslie, Montgomery.

First Report of Credentials Committee—Mrs. W. L. Smith, Montgomery.

Report of Reading Committee—Mrs. Kermit Pitt, Decatur.

Message—Dr. Douglas L. Cannon, Secretary-Treasurer, the Medical Association of the State of Alabama, Montgomery.

Annual Reports of Officers.

Annual Reports of County Presidents:

Southeastern District—Mrs. W. T. Burkett, Dothan.

Coffee—Mrs. L. M. Johnson, Elba.

Covington—Mrs. W. G. Cumbie, Andalusia.

Elmore—Mrs. E. G. Moore, Tallassee.

Geneva—Mrs. E. T. Brunson, Samson.

Houston—Mrs. Charles Spann, Dothan.

Montgomery—Mrs. Cobb Laslie, Montgomery.

Pike—Mrs. D. H. Crook, Troy.

Russell—Mrs. W. B. Mims, Jr., Phenix City.

Northwestern District—Mrs. Weldon Ray, Bessemer.

Colbert—Mrs. D. D. Cox, Sheffield.

Cullman—Mrs. C. M. Gross, Cullman.

Jefferson—Birmingham—Mrs. Jackson Clayton, Birmingham.

Jefferson—Bessemer—Mrs. J. M. McMahon, Bessemer.

Lauderdale—Mrs. Russell S. Hightower, Florence.
Marion—Mrs. Robert H. Mason, Hamilton.
Morgan—Mrs. L. C. Harris, Jr., Decatur.
Pickens—Mrs. William Hill, Carrollton.
Tuscaloosa—Mrs. J. R. Shamblin, Tuscaloosa.
Walker—Mrs. Francis Nicholson, Jasper.

Memorial Service—Mrs. W. J. Rosser, Birmingham.



Friday, April 18

8:30-12:30—Registration.

9:00 A. M.—Second General Session, Jefferson Davis Hotel.

Call to Order—Mrs. William Noble, Fort Payne.

Invocation.

Introduction of Guests.

Second Report of Credentials Committee.

Minutes—Mrs. Kermit Pitt, Recording Secretary, Decatur.

Message—Mr. W. V. Wallace—Executive Assistant, Medical Association of the State of Alabama, Montgomery.

Annual Reports of County Presidents (Continued):

Northeastern District—Mrs. Herman Frank, Gadsden.

Blount—Mrs. V. E. Whitehead, Blountsville.

Calhoun—Mrs. N. T. Davie, Anniston.

DeKalb—Mrs. C. D. Killian, Fort Payne.

Etowah—Mrs. H. J. Gowaty, Gadsden.

Jackson—Mrs. M. H. Lynch, Scottsboro.

Madison—Mrs. A. P. Owen, Huntsville.

Marshall—Mrs. Walter Alves, Guntersville.

Talladega—Mrs. M. D. Jacobs, Sylacauga.

Southwestern District—Mrs. William E. Purvis, III, Mobile.

Baldwin—Mrs. P. A. Bryant, Bay Minette.

Dallas—Mrs. P. B. Moss, Selma.

Escambia—Mrs. E. O. Scharnitzky, Jr., Brewton.

Mobile—Mrs. A. S. Dix, Mobile.

Recommendations from the Executive Board.

Presentation of Budget for 1958-59—Mrs. J. R. Chandler, Finance Officer, Magnolia Springs.

Recognition.

New Business.

Announcements.

Report of Nominating Committee—Mrs. John Holley, Florala.

Election of Officers.

Election of Nominating Committee.

Election of Delegates to National Convention.

Final Report of Credentials Committee.

Installation of Officers—Mrs. Paul C. Craig, President, Woman's Auxiliary to the American Medical Association, Wyomissing, Pennsylvania.

Presentation of President's Pin and Gavel.

Presentation of Past-President's Pin.

Introduction of Committee Chairmen for 1958-59—Mrs. H. Leon Rosen, Montgomery.

Adjournment.

1:00 P. M.—Luncheon at Jefferson Davis Hotel.

Honoring Mrs. Paul C. Craig, President, Woman's Auxiliary to the American Medical Association. Hosts, Montgomery County Medical Auxiliary, Mrs. Cobb Laslie, Presiding.

Invocation.
Achievements Awards.
Introductions of Guests and New Officers.
Address—Mrs. Paul C. Craig.
Adjournment—Mrs. William Noble, Fort Payne.
Following immediately, Post Convention Executive Board Meeting, Jefferson Davis Hotel.



CONVENTION RULES OF ORDER

1. There will be a registration fee of \$2.00 (includes Friday luncheon at the Jefferson Davis Hotel).
2. All persons appearing on program shall be seated in a reserved section at front of room.
3. Members of the voting body shall wear badges at all sessions of the convention.
4. When addressing the chair, the member shall rise, give her name, and the name of her county Auxiliary.
5. Unless notified to the contrary, each speaker shall be limited to two minutes and may not speak more than twice on any one question.
6. A timekeeper will notify each speaker when her two minutes are up.

HOSPITAL SERVICE FOR THE INDIGENT

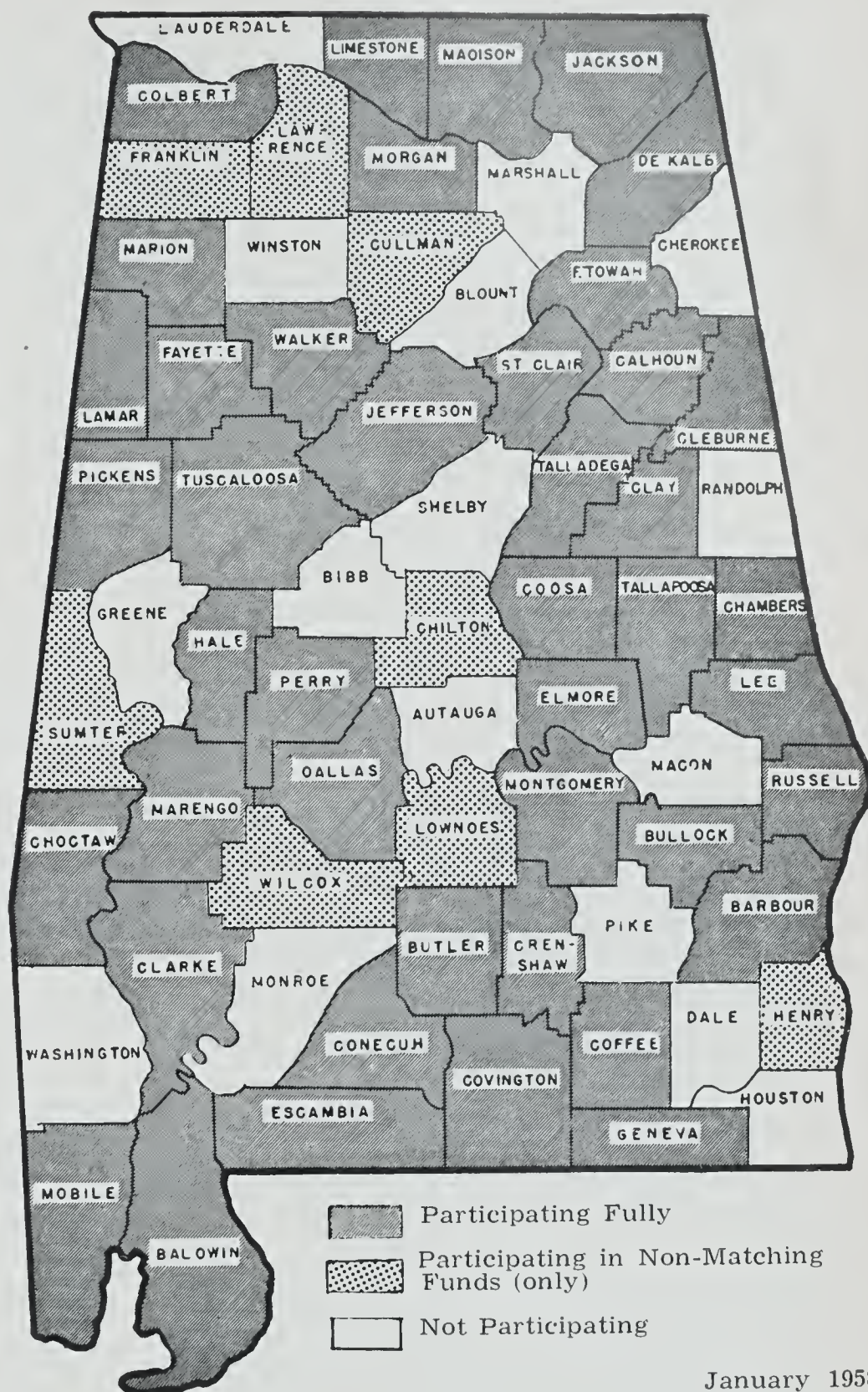
A program of hospital service for the indigent, Act 394, Legislature of Alabama, 1957 Session, has been set up and is in operation. Section 1 of the Act reads as follows:

"It is the legislative intent and purpose of this Act that the hospital service program for indigents provided for herein shall be a program designed and administered so as to provide hospitalization for those residents of the State of Alabama who are ill or injured, and who can be helped markedly by treatment in a hospital, but who are clearly unable to meet the cost of such hospitalization from their own resources or from the resources of those upon whom they are legally dependent. It is not intended that the program shall be burdened by attempting to provide purely domiciliary care for persons with permanently disabling diseases or illnesses, or with chronic diseases or illnesses, such as tuberculosis or mental disorders, which are already provided for under any special program of the State of Alabama or of the United States. It is also not intended that this Act shall be compulsory on any county, except during such time as the county agrees, in the manner prescribed herein, to participate in the program."

The State Health Department is fiscal agent, and an outline of procedures which have been established under the direction of Dr. Ira L. Myers, Administrative Officer, is printed herein as a guide for participating physicians. Further information can be obtained from Dr. Ira L. Myers, Administrative Officer, State Health Department, State Office Building, Montgomery 4, Alabama.

The law provides that the governing body of the county certify in writing to the State Board of Health not later than the first day of January each year that the county desires to participate in the program during the current fiscal year.

COUNTY PARTICIPATION Fiscal Year 1958



Application and Authorization

Application forms are available through participating hospitals. The form is in four parts: Part 1, to be completed by the patient or next of kin; Part 2, diagnosis and certification by the physician; Part 3, authorization by the Chairman of the Admissions Committee; and Part 4, to be completed by the hospital upon discharge of the patient.

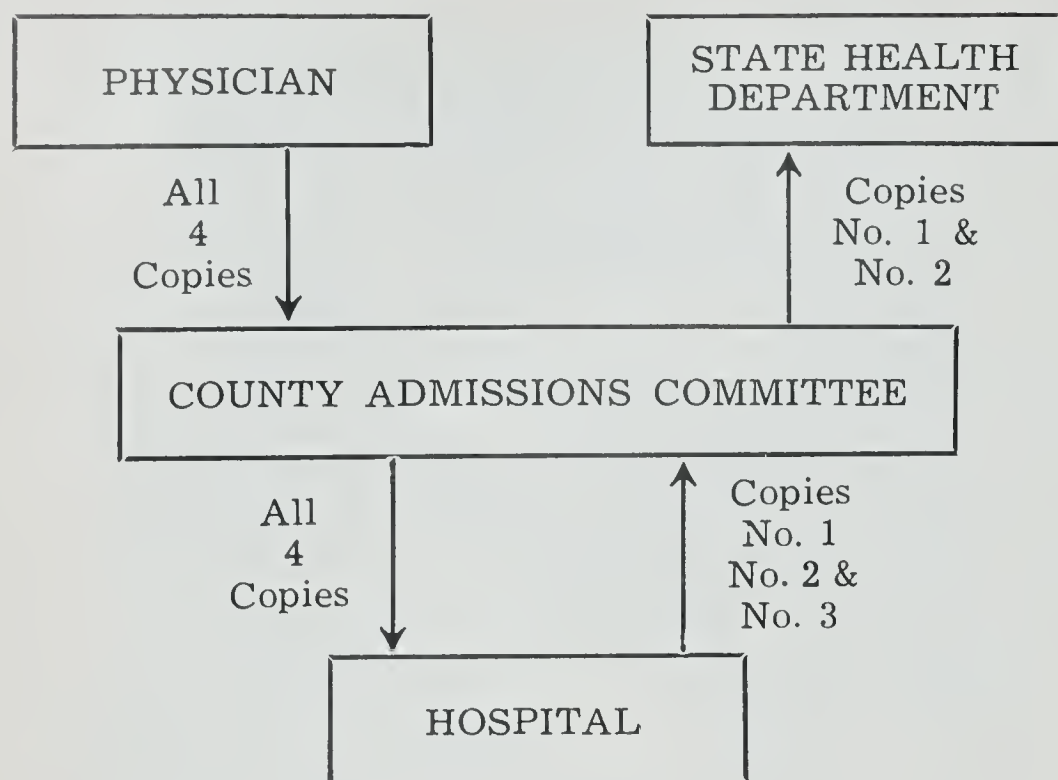
Hospitals are given the choice of being paid a flat \$10.00 per day or actual non-profit basic per diem cost, based on an interpretive financial statement.

Rules and Regulations

The Rules and Regulations of Hospital Services for the Indigent were mailed to each member of the Medical Association with PR Notes—Volume XI, No. 2, February 1, 1958. The program has been set up in a manner which should enable hospitals to render service to the indigent promptly and efficiently.

ORGANIZATION SECTION

ROUTING OF APPLICATION AND AUTHORIZATION—Form HSI-2



Physician initiates form; sends all 4 copies to County Admissions Committee.

Admissions Committee, upon approval of application, sends all 4 copies to Hospital.

Hospital completes "Claim for Services" portion upon patient's discharge, retains Copy No. 4; sends Copies No. 1, 2, and 3 to Admissions Committee.

Admissions Committee approves "Claim for Services," retains Copy No. 3; sends Copy No. 1 and Copy No. 2 to State Health Department.

The Association's Role

The 1957 annual report of Dr. J. Paul Jones' Committee on Indigent Care read in part as follows:

"Your committee has worked very closely with the Interim Legislative Committee and has tried to represent the thinking of the profession of this state. Traditionally, medical men have taken care of the indigent sick and will continue to do so. Proposed legislation would provide for payment of some of the hospital expenses for those unable to finance their illnesses, but makes no provision for the payment of physicians' fees. Hospitals, hard pressed to make ends meet, would get some relief from their indigent load, and this might well be reflected in reduced costs to paying patients. Local determination of eligibles, after medical determination of medical need, would seem to be a wise safeguard.

The Alabama Hospital Association is endorsing this program and the Board recommends that the Medical Association add its support to the proposed legislation."

The report of the committee was adopted by the Board of Censors on April 20, 1957 and the Act so written, providing that physicians should receive no public funds for attending or treating a patient hospitalized under the Act. Section 15 of Act No. 394 states:

"No physician shall be entitled to receive any public funds as a fee for attending or treating an indigent patient hospitalized under the provisions of this Act, it being the intent and purpose of this Act that all such professional medical services shall be furnished by such physician without cost to the State or any participating

county, but this shall not be construed as prohibiting any physician, hospital, or other interested party from collecting from such patient, or from relatives or others upon whom such patient is legally dependent, or from other third parties, the amount of any charges for hospitalization or professional medical services rendered to such patient."

Members of the County Admissions Committee also contribute their time and talents. "The County Admissions Committee members receive no compensation for performance of duties imposed under this act."

As soon as the governing body of the state of Alabama enacted the necessary legislation, all parties concerned joined together to set up a realistic and workable program to provide hospital care for the indigent. Dr. J. Garber Galbraith, Birmingham, and Dr. J. O. Morgan, Gadsden, were appointed to the seven-man Advisory Committee which "consults with and advises with the State Board of Health on matters of policy, administration, procedure, rules and regulations to be promulgated, and any other matters pertaining to the administration and enforcement of the provisions of Act No. 394." Dr. Galbraith was elected chairman of the group, and both he and Dr. Morgan have been and are faithfully representing the people of Alabama and the Medical Association of the State of Alabama. This committee also serves without compensation.

This is a well organized program, of which Alabama is justly proud.

INTERPROFESSIONAL STATEMENT OF PRINCIPLES FOR ATTORNEYS AND PHYSICIANS IN ALABAMA

On December 5, 1957, a joint meeting of the Liaison Committees of the State Medical Association and the Alabama State Bar Association met for the purpose of drawing up a code for Attorneys and Physicians in Alabama. This code, "Interprofessional Statement of Principles for Attorneys and Physicians in Alabama," follows as approved by the joint committee. It will be submitted during the 1958 Annual Session of the State Medical Association for adoption.

PREAMBLE

Acknowledging that a substantial part of the practice of law and medicine is concerned with the problems of persons who are in need of the combined services of a lawyer and doctor; that the public interest and individual problems in these circumstances are best served only as a result of cooperative efforts of all concerned; that members of both the legal and medical professions share an obligation to the individual and to society, we the Liaison Committees of the Alabama State Bar Association and the Medical Association of the State of Alabama, acting respectively on behalf of the Alabama State Bar Association and the Medical Association of the State of Alabama, do adopt and recommend the following declaration of principles

ORGANIZATION SECTION

as standards of conduct for attorneys and physicians in interrelated practice.

It should be emphasized that this Statement of Principles does not constitute legislation. It is the sincere hope of the Liaison Committees that the principles of conduct outlined will be observed and interprofessional relations be greatly improved thereby.

It is also recommended that committees be appointed by the Bar and by the Medical Society at the county level for the purpose of improving interprofessional relationship by the adoption and implementation of this Statement of Principles.

MEDICAL REPORTS REQUESTED BY ATTORNEYS

1. It is recognized that a physician is not required to give medical information concerning a patient except under proper authority. It is recommended as proper that opposing counsel obtain and grant such authority when satisfied that information is sought in good faith for evaluation purposes.

2. When requesting such reports, the attorney should clearly specify the information desired, indicating whether or not it is to embody opinions regarding diagnosis, prognosis and disability evaluations.

3. Upon receipt of such request and authority, the physician should recognize its importance in furthering the ends of justice and furnish said report promptly and comprehensively.

4. It is not always possible for the physician to prepare a medical report on short notice, especially if it requires the complete examination of an unfamiliar patient or the perusal of any works of reference. The allowance of adequate time therefor permits the physician to provide a more comprehensive and satisfactory report.

MEDICAL TESTIMONY

1. The attorney and physician should confer prior to the physician being called to testify by said attorney in any legal proceedings, unless it is mutually agreed that such conference is unnecessary.

2. Such conference should be held at a time and place mutually convenient to the parties, and at which time the attorney and physician should fully disclose the matters concerning which the witness is to be interrogated and the testimony that will be given.

3. If the attorney plans to have a subpoena served on a physician he should so notify him promptly, preferably in advance of service where circumstances permit.

4. Under no circumstances should an attorney seek or attempt to have the physician color or

shape his expert testimony in such manner as to favor the interest represented by the attorney.

5. It is recognized that the administration of justice by the courts cannot depend upon the convenience of litigants, attorneys or witnesses, including physicians called to testify. Therefore:

- (a) The attorney should notify the physician as far in advance as possible as to when he is to be needed to testify, and keep him notified and advised as to any changes in this respect as they arise.
- (b) The physician should arrange to appear promptly when requested and do so unless prevented by circumstances which would constitute legal excuse.

6. The physician, while testifying should:

- (a) At all times maintain the dignity of his profession;
- (b) Answer questions as concisely and objectively as possible, using terminology, when permissible, which is understandable to a jury of laymen.
- (c) If he does not know the answer to any question, so state and make no attempt to conjecture or theorize, or give answers not responsive to questions propounded or volunteer testimony;
- (d) Under no circumstances permit any bias, prejudice, favoritism or personal interest to influence his testimony.

7. The attorney, in examining or cross-examining a physician, should:

- (a) Avoid questions which browbeat or badger the physician. Questions of this type are no doubt designed to discredit a witness' testimony by inciting emotional demonstration and are beneath the dignity of the ethical attorney and equally in violation of the dignity of the physician. No judge or presiding officer should tolerate these tactics but when they do arise and are not acted on promptly, the witness may address the court and inquire if he is required to submit to such treatment. Rarely will an administrator or judge fail to restore the hearing to its proper level if such a request is made.
- (b) Prepare and propound all questions to the witness in such form and manner as will permit clear understanding and a forthright answer.
- (c) Cooperate with the physician by minimizing, as far as practicable, the time required for the physician to remain in court.

COMPENSATION FOR SERVICES OF PHYSICIANS IN LITIGATION MATTERS

1. A physician is entitled to reasonable com-

pensation for professional services rendered. The physician is within his rights in requiring that satisfactory arrangement be made for the payment of reasonable compensation for his services in furnishing any reports, attending conferences, performing examinations or rendering other professional services when requested by an attorney; but this right may be waived by the physician when, in his judgment, the person involved is unable to make payment.

2. While it is recognized that it is the statutory duty of the physician to testify under subpoena, it is not considered improper for him to be compensated for necessary loss of time on a reasonable basis with the consent of the litigant causing the subpoena to be issued.

INTERPROFESSIONAL COURTESY AND TOLERANCE

It is recognized that both legal and medical professions are essential to society; and their aims

are essentially parallel. This necessitates at all times full understanding and cooperation. Each has the duty to develop an enlightened and tolerant understanding of the other in the best interests of the public, as well as the reputations of the two professions.

CONFERENCE ON CITIZENSHIP

The State Medical Association was represented at the Second Alabama Conference on Citizenship which was held January 16 in Birmingham.

The morning session consisted of group discussions with particular emphasis toward enumerating and understanding various roles of the citizen.

Five panelists discussed "George is Busy—Do it Yourself" in the afternoon session. A dinner meeting concluded the session at which time Mr. Leonard Read, President, Foundation for Economic Education, gave the address.



ASSOCIATION FORUM

THE ROLE OF PHYSICIANS AND HOSPITALS IN ADOPTIONS IN THE UNITED STATES*

Samuel Karelitz, M. D.

New York City, New York

The intricacies of adoption procedures clearly explained with emphasis on the importance of social agencies involved. Also, warnings about the dangers inherent in the physician playing a lone role as benefactor in adoptions without the use of social agencies.

Adoption concerns the child, the natural parents, the adoptive parents and the community but it is generally acknowledged that adoption is centered about the child and that the interest of the child is the primary concern of adoption. The happiness of the orphaned, abandoned or voluntarily surrendered child who is being considered for adoption is completely dependent on the family in which he is placed. The adopted child will

attain his maximum potential only if he gets the security and affection of a family which will supply his needs in a continuing relationship. The fulfillment of these conditions requires careful evaluation of the child, of his natural heritage and of his adoptive family.

NATURAL PARENTS

The problems of the natural parents who offer their child for adoption are grave and numerous. The decision to give up their child may or may not be the best solution of their problems. These parents must be given the opportunity to reach a decision whether they can, with or without help, provide for their child in their own home at present or eventually, or whether they are not and will not be able to assume the necessary parental role, and should, therefore, release the child for permanent placement with another family.

Similarly, the childless couple which feels the need to express love, affection and natural parental instincts to care for and raise a child, and believe that their needs can be fulfilled by adopting a child, deserve a hearing and counsel. The adoptive parents may have problems which will not be solved by adoption. Furthermore, their capacity

*This paper was presented at a Rocky Mountain Regional Conference on Adoptions, September, 1956 and is reprinted from the Rocky Mountain Medical Journal, August 1957. Doctor Karelitz is Chairman of the Committee on Adoptions of the American Academy of Pediatrics, and has been a consultant to the Louise Wise Child Adoption Center in New York City for a number of years. He is Chief of Pediatrics at the Long Island Jewish Hospital.

to provide the proper family life and opportunities for healthy personality development of the available child must be evaluated.

There are more facets of the adoption which must be considered. There are problems of physical and mental health of the child, of the natural parents and of the adoptive parents. There are also problems of race, religion and law which enter into adoption. In brief, adoption is an involved and highly specialized procedure which requires the knowledge and skill of trained personnel. It is unlikely that any one individual alone can successfully conduct adoption practice. Indeed, to be successful, adoption requires the efforts of a group, the social service case worker, the physician, the lawyer, the psychologist, the psychiatrist, occasionally the geneticist and others. Adoption has rightfully become the concern of legally authorized agencies, public and private, consisting of trained personnel of many disciplines who are equipped to render service to all, the unmarried mother, the child, the adoptive parents and to the community.

PHYSICIAN IMPORTANT

The physician is an important member of such a group. How does the physician fit into the adoption? In the United States there are annually about 175,000 births out of wedlock and of these children 65,000-75,000 are adopted. Since at least one natural parent, the mother, and two adoptive parents are concerned with each adoption, and since at least two or three and in some areas some ten to thirty pairs of adoptive parents have to be evaluated for each available child, the total number of individuals whose health has to be considered by physicians is great, possibly in excess of one-half million. This is only part of the doctor's job. Physicians of various disciplines are of great help to and play a vital role in adoption agencies. The duties they perform might best be described by indicating what is done by the doctors connected with the Louise Wise Adoption Committee.

An *obstetrician* selected by the mother or one serving the hospital to which she is referred by the agency renders pre- and post-natal care and delivers her baby. The agency obstetrician reviews the obstetrical and gynecological history of the applicant for adoption in an attempt to determine the reason for infertility and whether infertility truly exists. If this possibility has not been excluded, he may, after careful consideration, recommend that this couple have further examination and treatment for their apparent infertility. For the agencies which have ten or more applications for each available child, the selection of adoptive parents is made easier if those who might have their own children are temporarily excluded.

HEALTH OF ADOPTIVE PARENTS

The *internist* reviews and interprets reports of the physical examination of the mother and of the adoptive parents. It is his task to detect serious illness which may interfere with the adoptive parents' longevity or with their ability to participate in the child's activities. If an infant is accepted into a family constellation, he should have a mother and father who are in good health and who have the average expectancy of life. It would be unfortunate for a child who has been separated from his natural parents to lose either adoptive parent soon after adoption. Yet, in some instances, people with chronic decompensated heart disease, chronic nephritis, paraplegia, multiple sclerosis, and some who had recently undergone operations for incurable cancer, have been recommended to the agency as applicants for adoption by physicians who conceal information about or minimize the gravity of these conditions and indicate only that these individuals cannot or may not bear children.

PEDIATRIC EXAMINATION

The *pediatrician* studies the natural parents' history and that of the child for congenital and inherited defects or abnormalities, or disease traits and must decide whether an infant born of a mother with disease or disease trait may be accepted by the agency. He examines the baby in the first few days of life for defects and for diseases. If the infant's condition is good, this fact is transmitted to the agency case worker. The child is then considered suitable for acceptance and for adoption. If the child's heritage is good he may be considered for immediate or early placement. If for one or another reason, legal, social or medical, he is not placed immediately, he is placed in temporary foster care for further observation. During the stay in the foster home the pediatrician supervises the care and feeding of these children, rendering the same attention to them as he does to those entrusted to his care in his private practice. After placement, and occasionally after adoption has been completed, the pediatrician may be asked to discuss medical problems which have arisen or to reexamine children who have problems which are suspected of predating placement. Pediatricians are interested in the general health or total welfare of the child; they are interested in keeping these children in good nutrition, in protecting them against infection by good hygiene and by immunization; they are equally concerned with these children's emotional development, their fitting into society and their growing up to be good citizens.

It is of considerable importance that the pediatrician indicate to those who urge placement directly from the nursery that he is not infallible and should not be expected to detect all physical

or mental disturbances in the first few days or weeks of life. In fact, he often fails. In a period of fifteen years, the pediatricians associated with the Louise Wise Services have, on the first examination of the infant, found an appreciable number of defects which made him unadoptable. They have also missed disturbances in an appreciable number of those examined in the first few weeks of life. Most of these children were of I. Q. of 85 or below, according to the usual psychological testing procedure. Since all testing in the early months of life shows poor correlation with future development, it is possible that more of these would become adoptable.

Many adoption agencies do not have pediatricians on their staff. Judging by the type and amount of work I am called upon to do for our agency, I feel strongly that this deficiency can and should be corrected. Pediatricians from all parts of the United States would, I believe, if called upon, be pleased to participate in the adoption program.

The *psychiatrist* is one of the most important members of the adoption agency. He is regularly called upon by the workers for evaluation of the natural mother, the adoptive parents, and of the child, especially older children who may be up for placement. He is in constant demand to advise on policy making and public relations.

OTHER SPECIALISTS' AID

Whenever indicated, neurologists, dermatologists, ophthalmologists and others are called upon to help in the evaluation of children up for placement. The anthropologists and geneticists are particularly helpful on the question of hereditary defects and racial characteristics. These experts are usually available in the community, in the nearby hospital or university and are willing to aid, often without compensation. Whether it is in the role of the physician who corroborates the suspected state of pregnancy; whether as the family physician serving in the role of counselor to a distraught widow or abandoned woman left with her infant whom she cannot support; whether as the doctor being consulted about infertility by childless couples; whether as a member of a social agency interested in placing children for adoption, the physician is, or should be, an important link in the chain of personnel who participates in the practice of adoption.

When the physician diagnoses pregnancy in an unmarried mother, he is in a particularly advantageous position to help by referring her to the appropriate social agency for counselling service where she can be heard; her problem discussed by sympathetic, understanding workers; and where aid, in the form of advice, psychiatric consultation and financial support, may be obtained. To do this the physician must be informed of the entire

program of adoption aid available to the unmarried mother and of the existence of social agencies concerned with these problems. It is quite common for the doctor to be unaware of existing social agencies in the community, particularly designed to help just such a person.

DISSERVICE TO UNBORN CHILD

Whether it is because of being uninformed, because of lack of suitable facilities or because he prefers to take matters into his own hands, he does occasionally act as an intermediary between his patient and someone, a friend or acquaintance, who is eager to adopt a child. The mere fact that these adoptive parents eagerly desire a child seems sufficient justification for him to recommend that the baby about to be born be placed in their home. He considers the couple wanting this child to be suitable for this particular baby, in fact for any child which might be available. He usually bases this opinion on the knowledge that these adoptive parents have some means to support the child, or that they are socially prominent. He may be unduly influenced by the belief that the child will salvage a barren and unhappy marriage. Under such circumstances this physician assumes that he is playing the part of benefactor, although he is perhaps completely unaware of his limited qualifications for this role or of the possible disservice he is rendering to this unborn child, to the natural mother, to the adoptive parents and to society at large. If properly oriented he might be delighted to relinquish his role in adoption to others more suited for this work, provided such agencies are available.

A slightly different type of physician, of whom there are many, is he who is aware of existing adoption services but feels that by virtue of knowing both the unmarried and the adoptive parents, he is able to facilitate placement of this child with greater dispatch and secrecy than would be the case if a social agency was involved. He is often the one who avoids help of social agencies because "they are riddled with red tape, they employ favoritism in placing children, etc." This doctor is not dishonest but he is immodest and requires much more indoctrination to relinquish his so-called benevolent role.

Finally, there is the physician, fortunately rare, who sees a chance of making some easy money by acting as part of a so-called black market adoption group. This type of man probably has a character defect and is not likely to be influenced by education alone. He can and must be put out of business by sound and enforceable legislation and by other effective measures.

At this point, we must ask ourselves the following question: Assuming that all infants and children in the United States being offered for

adoption were to be referred by physicians to the existing agencies participating in this program, would there be adequate facilities to handle this case load? There is some doubt that the existing social agencies, public or private, are adequate at this time to handle the large number of adoptions which take place each year, approximately 75,000, but I am certain that they would try to meet this challenge. If we are to eliminate or even sharply reduce "independent" placements, we must accomplish it by increasing facilities where they are now inadequate in number, and improving the quality of those whose work is below acceptable standards.

EDUCATION NEEDED

As one of the first steps in the correction of the existing deficiencies, we must increase the education of physicians, medical students and nurses in the matter of adoption and to acquaint them with the workings of social agencies and social service groups. This subject is sadly neglected in most of the medical schools. The medical student should be given at least one lecture during his senior year, and those going into obstetrics and pediatrics should be made more aware of adoption while in their internships and residencies. I have often discussed adoption at ward rounds. Whenever a child who is to be adopted is admitted to my pediatric ward, I invariably discuss his adoption with my staff. The nurses and house staff have always expressed interest. On several occasions I have presented a clinic or round table discussion on adoption at hospital staff meetings and before pediatric, obstetric and general practitioner groups. The panel for such a round table discussion usually consisted of an executive and a case worker from an adoption agency and myself, and on occasions also an obstetrician, a psychiatrist and an adoptive parent. Such sessions were always enthusiastically received, and the referrals of infants to the Louise Wise Adoption Service increased for some months thereafter. Barnstorming of this type makes it possible to dispel some mistaken ideas of the manner in which adoption agencies work, especially the notions that you must have pull, or that you have to be rich to get a baby, and that modern agencies are so psychiatrically oriented that "your chance of getting a baby is much greater if you have been psychoanalyzed."

At almost every such session, I have been approached by at least one disappointed physician whose application for a baby was not acted upon favorably by an adoption agency and who subsequently obtained a baby through independent sources. He is very likely to be aggressive and hostile in his comments, but in doing so he presents us with the opportunity of elucidating

many difficult problems to him and to the rest of the audience.

HOSPITALS AND SOUND ADOPTION POLICIES

Having stressed how the physician of various disciplines can be of help in adoption, I will now turn to the role of the hospital and indicate how it could encourage sound adoptive procedures. Hospitals are ostensibly institutions which render medical care to sick persons. While this is their primary purpose, the service rendered in the hospital does not end when the appendix has been removed, the pneumonia cured, the rheumatic fever arrested, or with the birth of the baby. The better hospital is one of many social institutions which together render complete care, and is concerned with the patient from every aspect—medical, social and economic, not only while the patient is in the hospital but also after leaving it. The hospital social service department investigates the patient's domestic condition, the adequacy of housing, food, clothing, the presence of disease among parents and siblings and, when there is a need, arranges for extra help at home or for convalescent care, sanitarium care or rehabilitation in its broadest sense. Through the social service department the hospital calls upon any and all branches of community agencies to render complete service to the patient. In my opinion, anything less than this service is inadequate for total care of the needy patient. While many hospitals do not have social service departments, this service is available in most communities, towns, counties or states, through welfare agencies.

ETHICAL CONSIDERATIONS

No person is in greater need of sympathetic help than the unmarried woman who is about to be or has just become a mother. Very often this woman is delivered of her child away from her home, her city and state. She is uninformed about what help is available to her and her child, or after applying for aid may find herself ineligible because of being from another state. She is quite pleased to place her trust and the future of her child with the first person, often the physician whom she consults. The fact that more adoptive placements are made independently than through agencies is sufficient evidence of what happens through some physicians' activities. Since most of the births occur in hospitals, the hospital is made party to this procedure without, in most instances, being given the chance to render the services which are available to this unmarried mother and her child or to consider the ethics or morality of the entire procedure. Practices close to the margin of legality and far from acceptable, are tolerated in many otherwise fine hospitals. As an example of what happens, I shall cite the following:

U. M., the unmarried mother, visits the physician. She gets to him via an acquaintance, a pharmacist or some other person to whom she has gone for help. Directly or indirectly, the prospective adoptive couple is informed of the fact that a baby will be available. Through a lawyer, they contact the mother and arrange that this or another physician deliver this child. This girl is guaranteed secrecy and payment of all hospital expenses, plus a bonus. Of course, the physician's and lawyer's charges are also included. Usually prenatal care is limited to a minimum. Throughout this period her anxiety is great and the opportunity to discuss her condition with a sympathetic case worker is lost. She is finally admitted to a hospital, any hospital, but often to some special place where these physicians who attract such clientele have delivery room courtesy. She is registered, often under an assumed name or that of the prospective adoptive parents. The child is born. The satisfaction of seeing the child to which she gave birth is denied her for fear that her maternal attraction to the infant might cause her to change her mind about adoption. The infant is looked after by the obstetrician or general practitioner who delivered the child. In instances where I was asked by the physician who delivered the baby to examine the child, it has been made clear that I should not see the mother or discuss the matter with anyone other than himself.

On occasion the request that I examine the child came from the lawyer of the adoptive parents. Not infrequently the lawyer assured me that I would find a normal infant and after reporting some questionable finding, he would request that I minimize the significance when discussing it with the adoptive family. When it is time for the infant to be taken out of the hospital, a representative of the adoptive parents, a baby nurse or a relative, at times accompanied by their lawyer, presents a note signed by the mother and the child is taken away. In hospitals where no one but the mother may take her child from the hospital, the front steps of the hospital become the place of transfer of the infant to the representative of the adoptive parents. The hospital grounds become the place of barter. All this occurs without ever calling for aid or guidance of the social service department of the hospital or of the community. It is also known that on occasion, fortunately not common, nurses and interns have been part of an "adoption ring," including a physician and a lawyer, and have acted as intermediaries between the mother who happens to come into the hospital as a public charge and the other members of the group.

The solution of these problems is not simple but the situation can be improved almost immediately by prompt action of the medical boards or lay

boards of hospitals. To accomplish this I would suggest:

A. Orientation of the nursing and medical staffs in sound adoption practices and in the correct use of social agencies which perform this function.

B. Making it compulsory that parents of every child who is to be adopted, whether born in the hospital or admitted for medical care, be interviewed by a member of the hospital or community social service department.

C. Making it clear that no physician by himself can or may be involved in the adoption procedure without participation of the department of social service, and that such behavior will be cause for disciplinary action.

D. Making participation in unethical, illegal or the so-called "Black Market" adoptions cause for immediate separation from the medical staff.

The last two suggestions have become a part of the by-laws of the medical board of the Long Island Jewish Hospital and will undoubtedly eliminate to a great extent practices which might otherwise have occurred unnoticed or noticed but disregarded. Since most of our babies are born in hospitals, I look forward to cooperation from the American Hospital Association to exert its influence on member hospitals to concern themselves with adoption procedures.

ADOPTION A COOPERATIVE PROCEDURE

My attitude toward the role of the social agency in adoption is quite clear and I wish to re-emphasize that good adoption practice is inconceivable without such participation. I would hope that social agencies were equally aware of the role of the physician in adoption. In my many contacts with higher echelon representatives of social service workers, I have heard the attitude expressed or the implication made that the physician's counsel is sought but is not necessarily heeded. It has been expressed openly that the final say in the decision of adoptability of a child, or of suitability of adoptive parents, *must* be that of the social service executive. Undoubtedly, the social service worker or executive director of the agency should be the spokesman for the group. I am aware of the fact that some physicians rule out placement of children with relatively minor handicaps, while others are more liberal in their opinions. It is true that what is considered best for the child by one may not be in keeping with current medical opinion or with the opinion of the particular social service worker concerned. Furthermore, what physicians and social agencies considered contraindications for adoption ten to twenty years ago, we now regard as quite compatible with good placement. Nevertheless, I would warn against

the attitude that the final word rests with any one person or with any one representative of a single discipline. If this were true, no argument could stand up against the physician or the lawyer who takes on the entire adoption procedure as his role. Agency opinion must be group opinion and the physician as well as the case worker, the social service executive, and the lawyer, must share in it equally. Consultation with other physicians may result in a different opinion than that expressed by any one member of the group but the majority opinion should prevail.

There can be no doubt that, if social service help was made available to all unmarried mothers, fewer babies would be independently placed and many more would go through good agencies. A greater service would be rendered the natural parents, the infant, and the adoptive parents; in the long run making better adjusted, happier citizens for the community.

In summary, it is sufficiently evident that the physician of varied disciplines can and should render important and effective aid in adoption. Orientation of medical students and physicians as to the workings of social agencies in this field, and the advantages of sound adoption practice is needed. Hospitals can be effective aids in reducing the questionable types of adoption practice by insisting that the staff members must have social service participation in all adoptions with which they are concerned.

THE ROLE OF THE PHYSICIAN IN ADOPTIONS

W. A. Daniel, Jr., M. D.

Montgomery, Alabama

The foregoing article by Karelitz shows the need for better adoption practices, greater cooperation between legislative agencies, social services, doctors, hospitals and lawyers. In an effort to produce clarification of the role of the doctor in adoptions, a conference was sponsored by the United States Children's Bureau in Washington during December 1957. At this meeting was a representative group of obstetricians, pediatricians, public health physicians, psychiatrists, and a pediatrician who is currently the administrator of a hospital. This group considered the physician's place in adoptions, for he possesses a unique position whereby he may greatly help the child for adoption or he may begin a life-long tragedy for the child because of ignorance of modern standards and laws concerning placement of children with adopting parents.

A similar conference consisting of lawyers and another whose participants are in the field of social service will be held. Reports of all three meetings will be available for study by interested

individuals and agencies. As a brief preliminary report, this article will review suggestions on the Role of the Physician in Adoptions. The final report will be available shortly.

It is well known that the problem of adoptions has assumed great proportions and will continue to grow. With the tremendous increase in population and a rising birth rate there is need for adequate information to be given all physicians concerned in the process of adoption so that they may assume their responsibilities. The direct medical responsibilities of the physician rest first with the expectant mother. The doctor should assure her adequate prenatal care and refer her as early as possible to the nearest suitable authorized social agency. This agency may provide financial and psychological support, counselling, inform her of her legal rights, make plans for herself and the baby and aid in the readjustments to her community. The physician cannot provide these services, nor should he assume responsibility for them. The physician should arrange appropriate plans for delivery in her own or other community, and the social agency can help with these plans. Lastly, as a direct medical responsibility to the mother, the doctor should assure adequate postpartal care.

A second group of direct medical responsibilities concerns the newborn infant. Provision of adequate diagnostic appraisal and continuous medical supervision, whether in hospital or foster home, must be done until the infant is placed for adoption. If referral to the correct agency for adoption has not been done before birth of the child, this should be done as soon as possible after delivery to save many heartaches and minimize legal difficulties which may occur. Thirdly, there are direct medical responsibilities to the prospective adoptive parents. There should be adequate fertility studies before adoption is even considered, and once adoption is desired the couple should be referred to legally authorized social agencies.

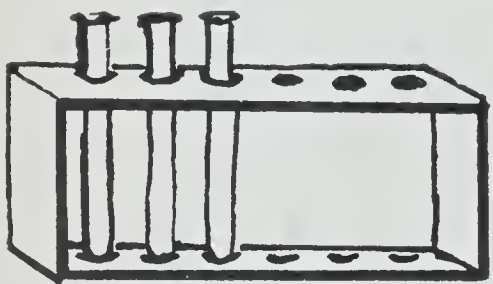
There are also indirect medical responsibilities of the physician who takes part in the adoption process. The doctor's responsibility to the social agency is to evaluate the health and medical suitability of the adopting couple and that of the child for placement, and to interpret the condition of the child to the social agency. There is a responsibility to the hospital staff, and the physician should participate in the development of hospital policies which will provide adequate medical care and procure social services for the mother and child, and hospital regulations which will prevent the participation of the physician's "playing God" in the furnishing of babies for adoption to couples of his own selections. Obstetricians and pediatricians should participate in research leading to the

improvement of adoption practice and participate in studies using adoption as a research setting for many medical studies such as growth and development, fertility, genetics, etc. There is an indirect responsibility as a community health planner in helping to interpret to the public inadequate services and regulations for the children and adults concerned in adoption and to collaborate in planning and establishing needed community services that are not available. Lastly, because physicians are in general well-educated members of the community, the indirect responsibility of the doctor concerns his role as an educator.

The way to better adoptive practices is through education as well as legislation. The informed physician can and should play a part, and his first task is to see that he himself is well-informed, for many physicians are unfamiliar with present regulations in Alabama and do not know the services available or procedures to follow when a couple desires to adopt a baby. Why should the physician be interested in the matter of education on matters of adoption? Because adoption of children involves a very large number of persons and has far reaching implications, because the physician may be the first informed person contacted by a mother seeking to give away her child, and in many areas the physician may be the only per-

son qualified to offer advice on matters pertaining to adoption. And the physician should be interested because he is in a position to understand the emotional reactions, motivations and mental health implications involved in adoption. To aid in the field of education the physician should help provide information to professional medical groups in the hospital, county society meetings and to medical students, and nurses. Lay groups such as ministers or priests, druggists, civic groups, school advisers, etc. have a right to obtain factual information and the well-informed physician is often the only or the best source for such facts.

In conclusion, it should be evident that the doctor must be well-informed on adoptive practices, regulations, and needs if he is to participate at all in this ever-increasing problem. Too often the doctor does not see the failures of adoptive parents, the legal battles, the physical or mental abnormalities presented at a later date by the infant given by the physician to an infertile couple. No longer is the physician in a position to provide the necessary services to the expectant mother, the infant and the adoptive parents. But, he now has certain direct and indirect responsibilities which he must accept if progress is to be made in this very worthwhile endeavor of modern society.



STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.

State Health Officer

HEEDING THE WARNING SIGNS OF CHICKENPOX

Do you have friends or relatives who tend to become unduly alarmed over illness? If so, you know that oftentimes the slightest indication that they, or their children, are not entirely well provokes a state of near turmoil. Their alarm and concern are spread around the neighborhood. Many people and practically every doctor perhaps know of persons who react this way to sickness and poor health.

On the other hand, you may also know individuals who "go to the other extreme," so to speak, where health is concerned. Such persons may carelessly disregard symptoms that should cause them to realize that they or their children need medical attention. Their behavior may result from their chronic and incurable optimism; it

may be hard for them to imagine that they, too, may become ill. Or these persons may be busy at work or play and feel they cannot spare the time to find out the real significance of the physical changes which are obvious to them and to others. Still others may know so little about illness and health that they may not recognize disease symptoms as such.

Whatever the reasons why many people do nothing about warning signals, such delay and postponement are dangerous. In some cases, the neglect may be disastrous.

The hazard of delaying a trip to the doctor's office is perhaps more easily recognized where the so-called serious diseases are concerned. The dangers may be almost as great, but harder to realize, where ailments of a usually mild sort are involved.

Chickenpox, for example, is a disease which has gained the reputation of being without danger, for all practical purposes. Thus, there is a widespread

inclination to refuse to take it seriously; many parents tend to regard chickenpox as one of those annoying but practically harmless experiences which comes to their children.

Despite its reputation and the opinion of many parents, however, chickenpox may be anything but a harmless disease. First of all, the disease has dangerous potentialities of itself. Moreover, it may lay the foundation for more serious illnesses.

If for no other reason, chickenpox needs to be taken seriously because its symptoms are strikingly similar to those of smallpox. You undoubtedly are well aware that smallpox is one of the most fatal of all diseases. The victims who do not die may bear all their lives the characteristic marked scars as evidence of their bout with the dread malady.

Thus, a child who appears to have chickenpox may in reality have smallpox. It is true that smallpox, fortunately, has all but disappeared due to the discovery of one man.

That man's name, Edward Jenner, is familiar to many people. While some may insist that his observation which led to the discovery was a "happy accident," still others are of the opinion that he could not have found the answer had he not been prepared by training and experience to discover it.

At any rate, all of us can be grateful that Dr. Jenner himself observed that milkers who suffered from cowpox were immune to the more dreadful smallpox. Either this, or that he bothered to investigate an old country saying, "Those who get cowpox never get smallpox."

It was about 1780 that Jenner is believed to have made his first private test of the smallpox vaccine. One of the first persons he inoculated was his only son. Because Jenner had had smallpox in his youth, he could not test the vaccine on himself.

Then some 16 years later, Dr. Jenner was ready to demonstrate the vaccine publicly. What was the public's reaction? The year was 1796, and the smallpox vaccine was met with hope and fear, anger and abuse. This was the response to a possible preventive of a disease which, in that century alone, killed approximately 60 million Europeans and claimed two million lives in Russia in a single year!

The criticism of the vaccine came from almost everywhere, it seemed. One leading surgeon denounced it, and one minister stated that it was against the will of Heaven to cure God-imposed smallpox by an inoculation with cowpox, of the man-made variety. "The most degrading relapse of civilization that ever disgraced the civilized world" was the verdict of still another minister.

The prejudice, ignorance and fear which Jenner's vaccine had to fight against is clearer still when other reactions of the time are considered. One widespread rumor described one boy who, after being vaccinated, started bellowing like a bull! And one vaccinated girl, Londoners said, grew hair all over her body and mooed like a cow!

The outcry against the vaccine, then, was loud and long. Despite the criticism, 70 leading London medical men signed a statement of confidence in it a year later. However, an unfortunate incident was to delay the public's adoption and fairly wide acceptance. A man named George Pearson began lecturing on smallpox and distributing free vaccine virus. It was reported that he had never seen an actual case of cowpox, and the vaccine he was giving out was proved to be contaminated.

Thus, it was not until 1803 that immunization against smallpox got off to a good start. In that year, Dr. Jenner began an inoculation program under the sponsorship of the Royal Jennerian Society. It was then that public confidence in the vaccine was restored. In less than two years, about 12,000 Londoners were vaccinated. And the result was that the annual smallpox death rate dropped from 2,018 to 622. At one time, Dr. Jenner was said to be inoculating about 300 people a day at his own expense.

Thomas Jefferson, history records, was one of the first prominent Americans to have his family inoculated with Jenner's vaccine. It may be that the vaccine won acceptance in America more quickly, perhaps than in other parts of the world. For as the spokesman for a leading drug company tells us in the *Journal of the American Medical Association*, America had already experienced its "first round of a struggle against smallpox, prejudice and fear."

To understand this first skirmish, the author of this article tells us of smallpox' arrival in North America with Columbus early in the sixteenth century. And by 1633, smallpox was epidemic in New England. Later, at intervals of two or 10 years, the pioneering colonists were stricken with the disease. So hard hit were they that official fast days were declared. On these days, the colonists prayed for "mitigation of the misery."

Smallpox was still rampant in 1721 in Boston when the Rev. Dr. Cotton Mather, a well-known name in American history, received a certain scientific publication from London. Included in the publication was an article describing inoculation against smallpox among the Turks.

Stirred by this idea, Dr. Mather tried to interest other Boston doctors in trying inoculation. His efforts met with no success however—until he

talked with a doctor named Zabdiel Boylston.

Boylston was interested, and he would try it, and try it he did on June 27 that same year. He inoculated his only son and two Negroes. What was the inoculating agent's composition? It consisted of matter taken from the pustules of a person afflicted with smallpox! Boylston described his method of obtaining the matter. It involved opening the "pock" on one side with a "fine cut, sharp toothpick (which will not put the person in any fear, as a lancet will do many)," pressing the boil and scooping the matter onto a quill. Afterwards, the quill was used to inject the matter into the individual.

This, then, was America's first experience with inoculation against smallpox—some 40 years before Jenner began his first vaccine tests. And the reaction then was similar in many respects to that which greeted Jenner's vaccine. Despite the fact that the inoculations proved successful, the procedure was denounced. Chief among Boylston's critics were his fellow doctors. But there were other persons who criticized, as well. Dr. Boylston was threatened with hanging if the patients died. Also, Benjamin Franklin, who was then 16 years old, and his brother, used their newspaper to attack him. Some people even tried to set his house on fire, and a bomb was thrown into Boylston's home. He was mobbed in the streets, and eventually he was forced to proceed secretly while making calls at his patient's homes.

Everyone was concerned, and everyone chose sides in the controversy, but only a small number sided with Dr. Boylston and the Rev. Dr. Mather. Such was the strength of the anti-inoculation group that they succeeded in persuading the Massachusetts House of Representatives to pass a bill prohibiting inoculation, but the bill never became the law of the state. The opposition spread to other sections of the colonies, with the New York governor issuing a proclamation forbidding inoculation by doctors in that area.

In the meantime, Dr. Boylston was undaunted. He continued his work, and soon doctors in other parts of Massachusetts adopted his procedure. It took many more years for the idea of inoculation to gain acceptance generally. That much of the criticism had died, however, is evidenced by the fact that Dr. Boylston published a front-page newspaper list of persons he had inoculated during a recent epidemic of smallpox.

It is interesting, also, that Benjamin Franklin, who had started out criticising Boylston, changed his position. In the years that followed, he lost his own son to the dreaded smallpox. And near the end of his life, he made an appeal to others to take advantage of inoculation. His words as he wrote them are:

"A fine boy of 4 years old, by the smallpox, taken in the common way. I long regretted bitterly, and still regret that I had not given it to him by inoculation. This I mention for the sake of parents who omit that operation, on the supposition that they should never forgive themselves, if a child died under it, my example showing that the regret may be the same either way, and therefore that the safer should be chosen."

Smallpox and inoculation continued to be discussed for many years. In fact, the Declaration of Independence, coming in 1776, competed for attention with smallpox and the possible advent of vaccination.

Thus, it might be said that the bravery and fortitude of Boston's Dr. Boylston and others who joined him in the inoculation battle paved the way for acceptance of Dr. Edward Jenner's vaccine when it came later. In much the same way, the work of organized public health agencies through the years from the late nineteenth and early twentieth centuries has paved the way for rapid acceptance of demonstrably effective preventive measures today.

It is true that sincere opposition, as well as prejudice, ignorance and fear, arises from time to time to thwart new preventive measures. But for the most part, the people have learned to place well-founded trust in their public health agencies. They have learned that when such agencies, in Alabama and elsewhere, take a stand on a new vaccine, sponsor and support it, then that new measure is an effective one—still another means of attaining better health.

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director

SPECIMENS EXAMINED

December 1957

Examinations for diphtheria bacilli and Vincent's...	93
Agglutination tests.....	397
Typhoid cultures (blood, feces and urine).....	397
Brucella cultures.....	4
Examinations for malaria.....	30
Examinations for intestinal parasites.....	1,951
Darkfield examinations.....	3
Serologic tests for syphilis (blood and spinal fluid).....	19,045
Examinations for gonococci.....	1,318
Examinations for tubercle bacilli.....	3,386
Examinations for Negri bodies (smears and animal inoculations).....	185
Water examinations.....	1,787
Milk and dairy products examinations.....	4,079
Miscellaneous examinations.....	2,460

Total 35,135

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USES AND LIMITATIONS OF TRANQUILIZING DRUGS IN THE TREATMENT OF PSYCHIATRIC ILLNESS

HENRY SPIRA, M. D.

Birmingham, Alabama

The tranquilizing or ataractic drugs were introduced into medical practice only a few years ago. Today, they are among the most widely used medications, and most physicians have prescribed them at some time or other for the relief of emotional disturbances or psychogenic symptoms. Yet, our knowledge of the therapeutic value of these drugs is far from complete, and this is in part due to the fact that improvement in psychiatric symptoms is not readily measured by objective methods, and to the well-known difficulty of separating the effect of any medication from the effects of the physician's personality and psychotherapeutic measures. Evaluation has been impeded also by a marked variability and unpredictability of results in individual patients. Toxic reactions induced by these drugs are receiving increasing attention and should be weighed against the indications for their use. In this paper, an attempt will be made to appraise the tranquilizers in various psychiatric treatment situations, on the basis of experience at the Neuropsychiatric Service of the Birmingham Veterans Administration Hospital and of a review of a small part of the available literature.

Rauwolfia serpentina has had an important place in the folklore medicine of India for many years, but following the isolation of its principal alkaloid, reserpine, in 1952, the properties of its constituents have been studied intensively. Another compound of completely different chemical structure, chlorpromazine, a phenothiazine derivative related to the antihistamine group, was introduced into psychiatric practice within the same year and was found to have similar, though not identical, effects. Investigations as to the mode of action of these drugs upon the nervous system have not yielded conclusive results. It appears that their effect depends upon selective inhibition of sub-

cortical activity, perhaps by influencing 5-hydroxy-tryptamine (serotonin). Rinaldi and Himwich,¹ in a series of experiments measuring the electrical activity of the brain of rabbits, found that electroencephalographic changes were brought about by stimulation or depression of what they called the mesodiencephalic alerting system, which includes the reticular formation of the brain stem and certain thalamic structures. Reserpine and chlorpromazine were found to depress the hypothalamus, but not necessarily the alerting system, which was even stimulated by large doses. The authors concluded that the effect of a drug on anxiety is the resultant of an integrated action on the alerting mechanism and the hypothalamus. Alleviation of anxiety is associated with depression of hypothalamic areas, either directly, as seems to be true for these two tranquilizing drugs, or indirectly, by affecting the afferent supply of the hypothalamus afforded by the alerting system. The preponderance of parasympathetic impulses seen under treatment with reserpine, such as hypotension, bradycardia, and increase in gastrointestinal activity, also indicates inhibition of sympathetic impulses arising in the hypothalamus. In large doses both drugs may produce complications obviously due to effects upon the brain stem. Better understanding of their mechanism of action may well increase our knowledge of the etiology and nature of mental illness.

Patients treated with adequate doses of chlorpromazine or reserpine may sleep for greatly increased periods of time but can be aroused much more easily than would be possible with conventional hypnotics. After a few days the increased need for sleep is reduced, but the patients become

1. Rinaldi, F., and H. E. Himwich: Drugs Affecting Psychotic Behavior and the Function of the Mesodiencephalic Activating System, *Dis. Nerv. System* 16: 133 (1955).

From the Veterans Administration Hospital, Birmingham.

more indifferent, less impulsive, quieter, and more relaxed, and the emotional significance of delusions and hallucinations decreases.² Those who respond favorably, usually, but not always, show changes of this type within a week. This sedative period is often followed by a turbulent period of increased anxiety, excitement, restlessness, and agitation, with even more pronounced delusions and hallucinations,³ and this should not be considered as a certain sign of therapeutic failure. In many cases the signs of increased tension subside after a few days or weeks and are followed by an integrative period, when the patient becomes calm, less agitated, more accessible and cooperative, and when delusions, and especially hallucinatory experiences, disappear to a greater or lesser extent. As already stated, there are considerable individual variations. Many patients fail to respond at all, while others may become excessively sedated or show evidence of toxicity, which may be sufficiently severe to make cessation of treatment advisable. Dosage will be taken up later. Severe psychoses require, of course, more massive doses than the psychoneuroses, in which, as a rule, only small doses are required and tolerated. It has been pointed out by many investigators, however, that the psychiatric diagnosis is less important in predicting the effectiveness of the drug than the type of behavioral disturbance shown by the patient. That is to say, excited, irritable, anxious, hyperactive, and confused patients improve much more readily than apathetic, "burned-out," withdrawn patients, so that this group of drugs appears to be specific for these symptoms rather than for any particular psychiatric disease.^{4,5}

In the setting of an acute intensive psychiatric treatment service, such as the one which was established in 1955 at the Birmingham Veterans Administration Hospital, it has been a blessing indeed to have these medications at our disposal. Disturbed, assaultive, destructive patients are often sedated to a remarkable degree and may be treated without other sedatives, hydrotherapy, restraints, or seclusion. We have been successful in treating cases of acute alcoholic hallucinosis, which so often constitute a management problem, with large parenteral doses of reserpine, together with smaller oral doses. We have found these

drugs also quite effective in controlling manic and acute schizophrenic episodes, particularly in the presence of delusions and overwhelming anxiety, and have used them especially when there was dangerous behavior and aggressive outbursts. Catatonic patients often show a favorable response. The confusion and excitement of some patients with organic brain syndromes, such as that due to arteriosclerosis, may clear quite rapidly. We confirmed the observation of others that cases of psychosis of more than five years' duration and deteriorated schizophrenics responded poorly. Both drugs seemed to ameliorate withdrawal symptoms in the treatment of narcotic addicts. They had a calming effect on some psychoneurotics, especially in the presence of marked diffuse anxiety and of psychophysiologic symptoms. Little or no improvement was seen in obsessive-compulsive psychoneuroses, and our experience in depressive reactions has been even more disappointing. In our experience, reserpine and chlorpromazine deepen depressions not only when the patient is retarded but even when he shows considerable psychomotor agitation, and are capable of bringing on depressive symptoms. We have, therefore, discarded them, and consider them contraindicated in the presence of depressive symptomatology. This, of course, agrees also with the findings of many other observers. It is difficult to make a generalized statement in regard to the effectiveness of this group of tranquilizers upon psychoneurotic disorders. While it would be incorrect to state that their activity is essentially the same as that of the older sedatives, it has been our impression that, with some noteworthy exceptions, psychoneurotic disorders show no more dramatic improvement under treatment with reserpine and chlorpromazine than they do with sedatives. It has been postulated that these two and related drugs have a distinct antipsychotic effect upon delusions and hallucinations⁶ which is relatively superior to their tranquilizing effect.

We have found both drugs of value in a variety of seemingly unrelated conditions where an emotional element was of importance and this is true especially for the control of vomiting with chlorpromazine. In many cases chlorpromazine can replace electroshock treatment for the purpose of quieting a disturbed patient, though this does not hold true for depressive reactions. In combination with shock it is said to have reduced the number of treatments necessary. However, cardiovascular collapse and unexplained deaths under such circumstances have been reported at a recent Veterans Administration conference. Chlorpromazine may be used together with barbiturates and other drugs for continuous narcosis or sleep treat-

2. Bleuler, M., and W. A. Stoll: Clinical Use of Reserpine in Psychiatry, *Ann. N. Y. Acad. Sc.* 61: 1, 167 (1955).

3. Barsa, J. A., and N. S. Kline: A Comparative Study of Reserpine, Chlorpromazine, and Combined Therapy, *A. M. A. Arch. Neurol. and Psychiat.* 76: 90 (1956).

4. Reserpine in the Treatment of Neuropsychiatric Disorders, Editorial, *Ann. Int. Med.* 43: 632 (1955).

5. Hoch, P. H.: New Drug Therapy in Psychiatry, *Bull. New York Acad. Med.* 33: 474 (1957).

6. Barsa, J. A.: The Dual Action of the Tranquilizers, *Am. J. Psychiat.* 114: 74 (1957).

ment, and this is said to produce fewer toxic reactions than the older methods of drug narcosis.

No definite standards have been established in regard to dosage or to length of administration, and several years will elapse before reliable information on these points will be available. More important than any figures on dosage or duration of treatment are the following principles. For one thing, the dose effective in each case is extremely variable and depends on the individual response of the patient, his illness, the severity of his symptoms, and the side effects produced by the drug. We have used chlorpromazine in daily doses ranging from 25 mgm. to 2,400 mgm. and reserpine in doses from 0.3 mgm. to 12 mgm., but larger amounts are occasionally prescribed. It is important to remember the wide range of dosage before deciding in an individual case that therapeutic results are unsatisfactory. At least three months of sustained treatment are needed to judge the efficacy of chlorpromazine.⁷ Even more importantly, dosage and duration of pharmacotherapy must be integrated into the total treatment. In most cases it is not enough to tranquilize the neurotic or acutely psychotic patient in order to improve him or to restore him to complete health. Psychotherapy, somatic and other forms of treatment should be carried out in order to utilize his increased accessibility which may often enable us to use more fundamental therapy. If we fail to do this, we can hardly be surprised if, after symptomatic improvement has taken place and the drug has been discontinued, the patient relapses and has to be put back on medication for protracted periods. If agitated behavior and delusions recur, they may be controlled at times by an increase in dose, and this again helps the therapist in his attempts to resolve the patient's conflicts more adequately by psychotherapy. As excitement abates, the dose can then be gradually reduced. It is even more difficult to establish the maintenance dose than the primary therapeutic dose.⁵ Since this paper is primarily concerned with short-term intensive psychiatric treatment, the duration of administration of these drugs will not be considered at length. Several follow-up studies of patients on chlorpromazine over periods ranging from 1 to 2 years^{7, 8, 9} indicate that, in the majority of chronic psychotics, treatment has to be continued for years, perhaps indefinitely, especially in those with illness of long duration. Pro-

longed administration does not usually seem to lead to tolerance formation.

It is our feeling, one apparently shared by many others,¹⁰ that chlorpromazine is frequently superior to the Rauwolfia preparations, especially in more severe cases, and we have gradually shifted emphasis to the former, using reserpine chiefly when chlorpromazine fails, or in milder psychoneuroses. Chlorpromazine leaves the patient more alert and acts faster than reserpine; because of its shorter period of action, however, it has to be prescribed in divided daily doses. Chlorpromazine tends to euphorize some patients slightly,² and this may be one of the reasons why patients usually complain more of subjective discomfort, such as flushing, nausea, lassitude, nasal stuffiness, and nightmares, under prolonged treatment with reserpine. Chlorpromazine produces large, painful infiltrates on intramuscular injection, and, if feasible, we always give it by the oral route. Whereas both drugs may precipitate orthostatic syncope and should be given parenterally only to hospitalized patients, chlorpromazine administration is often accompanied by tachycardia while reserpine generally leads to bradycardia.² Our choice between these two groups of preparations should be influenced by the above factors, the severity and length of illness, rapidity of action desired, the comparative cost to the patient, and by the toxic reactions to be described presently, particularly if there is a history of hypertension, liver or gallbladder disease, or drug idiosyncrasies. The two drugs have been used in combination, and with barbiturates and other sedatives, in an effort to reduce their toxicity and increase their usefulness. Combined therapy seems to have found more favor in chronic psychiatric illness.³

In addition to the side effects already mentioned, the most important of the serious reactions seen with use of these and related tranquilizers include symptoms of Parkinsonism, liver damage, skin eruptions, convulsions, blood dyscrasias, including agranulocytosis, and severe suicidal depressions. However, there are many others, some of which do not warrant discontinuing therapy. A review by the Council on Pharmacy and Chemistry of the American Medical Association in January 1956¹¹ revealed that a total of at least 45 cases of blood dyscrasias had occurred up to that time coincident with, though not necessarily as a consequence of, chlorpromazine therapy. It was estimated that 4 million people in the United States had been exposed to chlorpromazine since its introduction so that the rate of incidence of blood dyscrasia is

7. Cares, R. M., et al.: Therapeutic and Toxic Effects of Chlorpromazine Among 3,014 Hospitalized Cases, *Am. J. Psychiat.* 114: 318 (1957).

8. Feldman, P. E.: Two-Year Fate Study of Thorazine-Treated Patients, *Am. J. Psychiat.* 114: 237 (1957).

9. Kris, E. B., and D. M. Carmichael: Follow-up Study on Thorazine Treated Patients, *Am. J. Psychiat.* 114: 449 (1957).

10. Margolis, L. H.: Pharmacotherapy in Psychiatry: A Review, *Ann. N. Y. Acad. Sc.* 66: 698 (1957).

11. A. M. A. Council on Pharmacy and Chemistry, Blood Dyscrasias Associated With Chlorpromazine Therapy, *J. A. M. A.* 160: 287 (1956).

low, perhaps 0.001-0.002%. Seventeen cases were fatal. It is probable, of course, that not all instances of blood dyscrasia were actually reported. Toxic effects upon the hematopoietic system or liver have not been reported after reserpine. Liver damage and jaundice occur in a significant number of cases treated with chlorpromazine, usually during the first month of treatment, and appear to be due in some instances to an obstructive cholangiolitis which may persist for many months.¹² Administration of the drug should be halted at the first sign of icterus or bilirubinuria. Though most cases of jaundice clear within a few weeks after cessation of therapy, and though jaundice may even disappear when the drug is continued, it would seem at the present stage of our knowledge that chlorpromazine should not be prescribed in the presence of, or with a history of, impaired liver function. Parkinsonian symptoms appear at least as frequently with reserpine, especially with large doses. This extrapyramidal syndrome, with coarse tremor, muscular rigidity, and immobile facial expression, which may lead to a picture indistinguishable from true Parkinsonism, is apparently reversible when the drug is withdrawn or the dosage reduced, and can also be controlled by appropriate medication. However, studies over longer periods of time, and possibly animal experimentation, will be necessary before we can definitely state that the Parkinsonian syndrome cannot become permanent in these patients.

On our service we have observed few serious side reactions, but a rather high incidence of orthostatic syncope and skin rashes. We have admitted several patients who attempted suicide with tranquilizing tablets. No suicides with tranquilizers were noted in the literature. The tendency of the Rauwolfia preparations, and to a lesser degree of the phenothiazines, to aggravate depressions may partly account for these suicide attempts. The physician who prescribes these drugs, especially for ambulatory patients, should make certain that the patient shows no evidence of depression, and the patient and his relatives should be instructed to report mood changes, as well as such physical changes as chills and fever, a sore throat, itching, anorexia, nausea, darkening of the urine, or light-colored stools. Differential cell counts should be done routinely as long as the patient is on chlorpromazine, no less than one month apart, and preferably at weekly intervals during the first month of treatment. Most important of all, it is obvious that these drugs should only be taken under a physician's constant supervision.

An intensive search for compounds related to those so far discussed but of greater clinical use-

fulness has not yet yielded a definitely superior compound. Six derivatives of Rauwolfia were studied in regard to their therapeutic value in the treatment of schizophrenics.¹³ Some drugs were found to give better results than others, but the spread was not too wide. Phenothiazine derivatives clinically tried on a larger scale include promazine (Sparine), promethazine (Phenergan), mepazine (Pacatal), prochlorperazine (Compazine) and perphenazine (Trilafon). Promazine has pharmacologic properties closely resembling those of chlorpromazine but a lower degree of toxicity. It is weaker and acts more slowly but this time lag does not occur with intramuscular or intravenous administration,¹⁴ and it is well tolerated by these routes and does not produce pain on injection. In alcoholic hallucinosis, promazine by the parenteral route may control hyperactivity within a short time, and the drug also possesses antiemetic properties. It produces less drowsiness than chlorpromazine and seems to be less hepatotoxic, but agranulocytosis may occur after its use also. Phenergan has been employed as an antihistaminic for some time and gives rise to considerable drowsiness. Mepazine appears to have a high incidence of side reactions (43% of the patients in one study¹⁵ developed toxic complications). Good results have been noted when this drug was combined with chlorpromazine.¹⁶ Prochlorperazine is not quite as effective as chlorpromazine but less toxic, and is best suited for patients manifesting a moderate degree of anxiety.¹⁷ Perphenazine is five to ten times as potent as chlorpromazine, and its action is similar to that compound. It has fewer serious side effects except for more frequent and earlier extrapyramidal symptoms.¹⁸ Because of its relatively low toxicity, it has been recommended for older patients.¹⁹ It would appear that none of these phenothiazines are greatly superior

13. Malamud, W., et al.: The Evaluation of the Effects of Derivatives of Rauwolfia in the Treatment of Schizophrenia, *Am. J. Psychiat.* 114: 193 (1957).

14. Azima, H., and H. Durost: Comparison of the Effects of Promazine and Chlorpromazine in Mental Syndromes, *Canad. M. A. J.* 77: 671 (1957).

15. Mitchell, P. H., et al.: Effects of "Pacatal" on Symptoms in Chronic Psychotic Female In-Patients, *Brit. M. J.* 1: 204 (1957).

16. Bruckman, N., et al.: Mepazine (Pacatal) Further Report, *Am. J. Psychiat.* 114: 262 (1957).

17. Lesse, S.: An Evaluation of Prochlorperazine in the Ambulatory Treatment of Psychiatric Patients, *Internat. Rec. Med.* 170: 599 (1957).

18. Cahn, C. H., and H. E. Lehman: Perphenazine: Observations on the Clinical Effects of a New Tranquilizing Agent in Psychotic Conditions, *Canad. Psychiat. A. J.* 2: 104 (1957).

19. Ayd, F. J.: The Treatment of Anxiety, Agitation and Excitement in the Aged, *J. Am. Geriatrics Soc.* 5: 1 (1957).

12. Wortis, J.: Review of Psychiatric Progress 1955: Physiological Treatment, *Am. J. Psychiat.* 112: 526 (1956).

to chlorpromazine. A wide choice of preparations is helpful mainly because some patients do not respond to one but may respond to another drug in this category.

In accordance with Truitt's classification quoted by Barsa,⁶ there are two other chemical groups of tranquilizers, the diphenyl methanes, including azacyclonol (Frenquel), benactyzine (Suavitol), and hydroxyzine (Atarax); and, lastly, meprobamate. Frenquel is a drug of unusual theoretical interest, which has been demonstrated to be capable of relieving confusion and hallucinations in some acute schizophrenic episodes. This is not consistently seen, however. We have tried the drug in a few hallucinatory patients, with little success, and several similar reports are contained in the literature. Doctor Fabing was able to show that this drug can block experimental psychoses induced by LSD-25 (lysergic acid) and mescaline. Benactyzine has many atropine-like side effects²⁰ and has not been widely accepted. In our hands hydroxyzine has proven to be a very mild tranquilizer causing some drowsiness.

Meprobamate, which is marketed under the trade names of Equanil and Miltown, reduces anxiety and tension, without affecting mental acuity. It is therefore truly a tranquilizing drug, but it usually has little influence upon the manifestations of psychotic illness. It has been suggested that the term ataraxic be reserved for those drugs which show a specific blocking action against delusions and hallucinations,²¹ the antipsychotic effect noted in the section on chlorpromazine and reserpine. Meprobamate, mephenesin, and related compounds have been termed central relaxants. They exert their action primarily on the thalamus, and it has been pointed out that they do not affect autonomic functions as do the above discussed drugs.²² Meprobamate has a simple chemical structure. It has the property of relaxing skeletal muscle without impairment of muscle function, and we have had excellent success with this drug in several cases of psychophysiologic musculoskeletal reactions and in conversion reactions associated with tics or tremors. We believe that it has real merit in many other psychoneurotic conditions of mild to moderate degree, allaying anxiety and somatic symptoms, especially when the patient has already developed some insight, and when autonomic activity is markedly increased. Meprobamate has found only very limited use in the treatment of

some psychotic reactions and in controlling withdrawal symptoms in the management of alcoholism, especially when combined with chlorpromazine. Its ease of administration (on the average, three to eight 400 mgm. tablets per day) and its comparative absence of toxicity recommend it for the treatment of the ambulatory patient. Through relief of anxiety, insomnia, muscle tension, and unpleasant somatic symptoms, meprobamate can prove to be a valuable adjunct of psychotherapy. Meprobamate may cause drowsiness, severe purpura, diarrhea, diplopia, dermatitis, hypotension and convulsions on sudden withdrawal.²⁰ Apparently, no true addiction has been ascribed specifically to meprobamate. We have not seen a case meeting the criteria of addiction but have seen a few patients who have developed considerable dependence upon meprobamate, and some who took doses in excess of those prescribed.

Many investigators have commented favorably on meprobamate, but others remain unconvinced that this drug yields impressive results in psychoneuroses. A study comparing five drugs, including a barbiturate and meprobamate, plus a placebo, has been reported from Britain.²³ The patients were psychoneurotic outpatients who were asked to record their assessment of the drugs in causing relief of tension. The average score for the placebo was close to a nil response. The average score for the barbiturate was significantly superior to that for the placebo, but there was no significant difference between the other four drugs and the placebo. This shows that we should not accept uncritically the superiority of this and other tranquilizers over the older sedatives. Each medication, however, was given over a period of only two weeks, and optimal results are not to be expected in this short time.

It may be appropriate to discuss, at least briefly, the limitations of the use of tranquilizers, a group of drugs for which, according to a market research firm, 35 million prescriptions were filled in 1956.⁵ Physical complications, which may lead to a fatal outcome, and suicidal depressions have been mentioned in an earlier section. Habituation occurs, and the World Health Organization has added the tranquilizers to their list of habit-forming drugs.²⁰ Addiction is rare but has been reported.²⁵ Pain and other physical symptoms of diagnostic importance, and evidence of organic illness such as nausea and vomiting, may be masked

20. Wortis, J.: Review of Psychiatric Progress 1957: Physiological Treatment, *Am. J. Psychiat.* 114: 603 (1958).

21. Gardner, A.: Meprobamate—A Clinical Study, *Am. J. Psychiat.* 114: 524 (1957).

22. Berger, F. M.: The Chemistry and Mode of Action of Tranquilizing Drugs, *Ann. N. Y. Acad. Sc.* 67: 685 (1957).

23. Raymond, M. J.: A Trial of Five Tranquillizing Drugs in Psychoneurosis, *Brit. M. J.* July 13, 63, 1957.

24. Szasz, T. S.: Some Observations on the Use of Tranquilizing Drugs, *A. M. A. Arch. Neurol. and Psychiat.* 77: 86 (1957).

25. Dickel, H. A., and H. H. Dixon: Inherent Dangers in Use of Tranquilizing Drugs in Anxiety States, *J. A. M. A.* 163: 422 (1957).

by indiscriminate use of these drugs. These factors alone suggest that we should view claims for these drugs and their non-toxicity with skepticism; that we should know what they can and cannot do; and that we should not use them for trivial complaints. A physical and mental examination and evaluation of the patient's emotional problems should be carried out before a tranquilizer is prescribed, and the patient must remain under careful observation, with frequent adjustments of dosage. If a less expensive preparation such as phenobarbital can do the same job in a given case, the economic factors also deserve consideration.

Physical ill-effects and depression may be easy to detect, but the indiscriminate use of these drugs may well harbor dangers which are less obvious, and which may not even be noticeable until many years have elapsed. *Primum non nocere*, "first of all, do not harm the patient," is a time-honored medical principle. Are the tranquilizers really as harmless for the patient's emotional life as they might appear to be? We must realize that frustration and the psychic discomfort resulting therefrom is not necessarily a noxious, abnormal influence. The hungry infant learns already that he has to wait a short time until his craving for food is satisfied. By overcoming minor stresses and frustrations we develop the ability to withstand the unavoidable stresses of everyday life, and acquiring tolerance for these strains is part of the normal development of our personality. Is it advisable to make our patients placid at all times and to numb their sensitivity to life's stresses? Tranquilizers have been recommended for children temporarily separated from their parents, for the apprehension caused by social and business worries, interviews, examinations, and so forth. Are we not assigning to those drugs, by prescribing them under these conditions, the role of an overprotective mother, who is shielding her child in an unwholesome manner from all minor adverse experiences at the expense of his character development? It would seem that we should not use these drugs in psychiatrically normal people, that we should prescribe them with great caution in children and adolescents or in those who are already emotionally overdependent, and that we should not use them merely to buffer the common traumatic experiences of everyday life. Apprehension and worry over a difficult life situation may actually spur the person to greater achievement, and he may thereby master the cause of his troubles. Making him more tranquil merely initiates, in some cases, a vicious cycle of stifling his ambition and inducing an artificial indifference and complacency which, in turn, prevents him from solving his problems in a realistic manner.

Even in patients who are clearly psychoneurotic, the use of these drugs may be contraindicated.

Especially in a patient who is already showing a favorable response to psychotherapy, the symptomatic relief which he experiences may reduce his motivation for further psychotherapy, which alone, in many cases, enables him to work out his problems and to attain lasting improvement. However, there certainly may be cases where the patient becomes symptom-free on tranquilizers alone, feels comfortable and is functioning well and is no longer in need of psychotherapy. Control of the patient's anxiety through use of tranquilizers may have another positive aspect in that the patient's attention is no longer taken up by his uncomfortable symptoms, which is a source of encouragement to him and makes him actually more accessible to therapy. The drugs should be integrated into the total treatment of the patient.

The tranquilizers may often be indicated when the patient is faced with overwhelming anxiety or extreme environmental strain. Even here, however, we must not forget that it is better to give the patient an opportunity to discuss, and if possible to master his problems, than to prescribe some symptomatic relief which is at best a temporary expedient. Even the spectacular relief from confusion and hyperagitation experienced by the psychotic patient must be appraised in terms of actual benefit to the patient. Though he may be more cooperative and tractable, this does not necessarily indicate that he is closer to recovery. We must not use the drugs as a "chemical strait-jacket"²⁴ merely for the advantage of the persons in his environment.

The possibility of even more far-reaching dangers stemming from the over-use of tranquilizers has been pointed out by some investigators.^{25, 26, 27} They have been compared to alcohol and tobacco.²⁸ It has been noted that anxiety and related symptoms are "important elements in the shaping of progress"²⁵ and may be incentives for greater achievement. Indiscriminate use of these drugs is therefore thought to carry grave social and moral consequences. The enormous demand of the public for tension-relieving drugs should make us consider the reasons for this demand and stimulate research in that direction.⁵

In summary, the tranquilizers have certain advantages over older drugs in the treatment of some psychoneurotic disorders and possess anti-psychotic effects which may at times eliminate the

26. Hazards of Tranquillity, Editorial, Brit. M. J. July 13, 92, 1957.

27. Peace of Mind. Comment, Am. J. Psychiat. 113: 663 (1957).

28. Sargant, W.: On Chemical Tranquillizers, Brit. M. J. 1: 939, 1956.

need for electroshock and other physical methods of treatment. They tend to increase the discharge rate from mental hospitals, facilitate the management of some patients, and appear to promote therapeutic contact. They are not a panacea to be prescribed in all cases of mental and emotional

illness. Significant side effects have been discussed. The tranquilizers are a supplement but not a substitute for psychotherapy. They should be taken only on a physician's prescription for well defined indications and under continuous supervision.

THE CORONER'S SYSTEM NEEDS REVISION

WM. D. McNALLY, A. B., M. D.

Spring Hill, Alabama

The office of coroner is a very ancient office under English Common Law. In England the coroner must be a barrister, solicitor, or legally qualified medical practitioner of not less than five years training. Some of the deputy coroners in London are both medical and law graduates. They enter the inquest rooms in robes similar to those some judges wear in our country, and give an air of dignity to the inquisition which is so lacking in the procedures in American practice. The coroner's court is the primary inquisition in which unexpected and violent deaths are inquired into, and our young medical men make their first acquaintance with criminal investigations when called as a witness by the coroner. A majority of physicians know nothing about the coroner's office and when summoned to appear at an inquest try to dodge their duty. It is not only before the coroner but before some of our judges that these same doctors absolutely refuse to appear. Recently, one doctor said to a lawyer, "If you call me to testify what I did for the patient in an auto accident, I will say the whole crowd was drunk," which would tend to nullify the testimony of other witnesses in the case. Part of the reluctance on their part is because they do not have any respect for the coroner, regarding him as an inferior individual, although this same doctor helped to elect the same coroner. In some instances there is justification for their attitude for men of mediocre standing have been elected to the office. Some medical men even go so far as to express their belief that the coroner's office constitutes a useless appendage to government, and have advocated its abolition in favor of the medical examiner's system, not knowing the faults of the latter. With this in mind the author hopes to apprise students of political science and the medical profession of the advisability of revamping the office as now conducted, and have it directed on a more scientific basis that will stand the challenge of the critics.

The functions of coroner follow the English Law in nearly all of the states. "Every coroner, whenever, and as soon as he knows or is informed that the dead body of any person is found, or lying within this county, supposed to have come to his

or her death by violence, casualty or any undue means, he shall repair to the place where the dead body is, and take charge of the same and forthwith summon a jury of six good and lawful men of the neighborhood where the body is found or lying, to assemble at the place where the body is at such time as he shall direct, and upon the view of the body to inquire into the cause and manner of the death."

In Alabama the coroner is "directed to take a sworn statement in writing of the witnesses having a personal knowledge thereof and submit the same to a judge of a court of record or a solicitor; and, if, upon such preliminary inquiry, the judge or solicitor is satisfied from the evidence that there is reasonable ground for believing that such death has been occasioned by the act of another by unlawful means, he must direct the coroner to forthwith summon a jury of six discreet householders of the county to appear before him forthwith at a specified time at a specified place and inquire into the cause of such death." The authors of this law, as it appears in Title 15, Section 76 of the Code of Alabama, 1940, must have recognized the fact of the inferiority of the men elected as coroners in that they lacked good judgment and had to have help and advice of the solicitor or a judge of a court of record. Men capable of their own good judgment should be elected to this office, preferably Doctors of Medicine. The law in this respect should be changed to allow the coroner to proceed with an inquest without having to get permission elsewhere. When the coroner reports a crime has been committed, then the solicitor or state's attorney can take over. The solicitor or state's attorney is charged by law with presenting facts in criminal cases for the consideration of the court and jury. It is not his duty to investigate and travel around to get the facts, as that work has been delegated by law to other agencies of the government.

The coroner's inquest serves a vitally useful purpose in that all the facts that are ascertainable at a time immediately following the commission of a crime are presented in proper form for the consideration of the coroner and his jury, to de-

termine the cause of death and who, if anyone, is responsible for an untimely death. In this respect the facts as known to available witnesses are reduced to writing and preserved for further use and reference. In some populous counties a representative of the state's attorney's office is present to hear the testimony of witnesses in criminal cases and may feel disinclined to institute any proceedings where a death was untimely caused, believing honestly that the facts in a given situation are not of sufficient importance to warrant a criminal proceeding. Cases are on record where prosecuting attorneys, either because of lack of information or inability to act or want of initiative to act, have allowed homicide cases to go unprosecuted, and the culprits would not have been brought to justice but for the conduct of an alert coroner who insisted on conducting an inquest and had the facts in writing, and for an alert coroner's jury, who, after hearing the facts as presented, concluded it was necessary that criminal proceedings be instituted.

If proper respect for the coroner's office is to be established, the coroner must keep records. A survey taken by the author to obtain statistics upon the number of deaths caused by the barbiturates from the county coroners of the various states was a dismal failure because hundreds of them answered, "We do not keep records." It is here that I want to make a plea that the medical profession wake up and demand that this archaic office be streamlined, keep accurate records, give us a wealth of information on various causes of death, and warn us of impending dangers. For example, a coroner in the North found people dying of methyl chloride poison, warned against the use of the refrigerant methyl chloride in multiple refrigeration units, making the doctors and the public aware of the risks to life and health. From this warning, ordinances in various parts of the United States were passed controlling its use.

The prosecution of a crime frequently embarrasses the prosecutor when confessions are attempted to be introduced upon trial of the case, or statements previously made by a witness to a prosecutor or to some law enforcement officer are offered as evidence, only to have it claimed that the statements of the witnesses were secured or the confessions obtained by coercion or "third degree" methods, thereby requiring the court to hesitate to receive these confessions or statements. Contrast this with the statements of witnesses under oath in an open hearing of a coroner's inquest, before a coroner's jury and coroner, where the witness can hardly say his testimony was obtained by fraud, duress, force or other unlawful means. Testimony of the accused or testimony of any witness given at the time of the holding of the coroner's inquest should not be denied admis-

sion in any court, and should the witnesses or the accused subsequently change their stories, then signed statements taken at the inquest, which have been preserved, can be used to impeach the witness or the accused. This is a point in favor of retaining the coroner's inquest. But, alas, most of the coroners in Alabama do not have such records preserved.

The public is entitled to have written testimony of the coroner's inquest preserved. Months after an accident witnesses and police officers will have forgotten many details of an accident or give conflicting evidence in court. The findings of insurance adjusters is introduced only as it helps their cases. If no criminal proceedings are introduced, the testimony is taken and preserved and perpetuated for the benefit, possibly, of some poor widow or orphan, upon which they may predicate a civil action. In addition, the recorded testimony may aid in the solution of a crime if new evidence is produced at a later time.

There are instances where evidence obtained at an inquest is insufficient to proceed in a criminal court because of certain missing links. This evidence may be discovered later and the culprit brought to the bar of justice because the coroner's minutes had been preserved. In other instances, the coroners, in dealing with accident and casualty cases, may find that criminal negligence was involved. Where there is any testimony in accident cases, it should be taken and preserved. Whatever the cause of death, the coroner's findings should be preserved.

The pleas for better medical examinations of sudden and unexpected deaths apply not only to Alabama but to many other states. The medical profession must be cultivated to accept its social responsibilities.

The medical and legal professions must realize that we are living in a changed world with more complications than ever before, that medical men must be trained in forensic medicine as a specialty, and that proper legislation should be introduced to grant the needed compensation, facilities and authority for the new coroner.

The compensation of the coroner, the deputy coroner, and the pathologist are woefully inadequate. Correct this condition and the attention and the interest in the coroner's office will not lag but be an inspiration for a duty and public service.

On May 21, 1953 the Medical Society of Mobile County passed a resolution requesting that Section 78 of Title 15 of the Code of Alabama, 1940, be changed so that only a licensed physician could sign a death certificate or hold an autopsy in coroners' cases. A bill incorporating these changes was introduced in the Legislature by Representative John Tyson of Mobile but failed to reach the

floor because of the log jam in the Senate. Something more radical than changing this section should be done when a coroner, learning that the body of a man had been retrieved from water, ordered it buried without seeing the body to aid in identification or finding out if foul play had been done. Performing an autopsy upon a "floater" (a drowned decomposed body found floating in a lake, river or other body of water) is not pleasant work but it must be done. Floaters have been found to have been shot, stabbed, poisoned or killed by other forms of violence, leading to further criminal investigation and prosecution.

In the medical examiner's system the medical work of the coroner's office would be transferred to that office, while the magistratic and legal functions would be transferred to the solicitor's office. The office of coroner has been recognized, according to both American and Anglo-Saxon jurisprudence, as a quasi-judicial office. His investigation into causes of death should be made free of bias, prejudice or desire to secure convictions inspired from the standpoint of holding some one responsible for the commission of a crime.

Another objection raised against the medical examiner system is that the solicitor or prosecuting attorney's office is unsuited for this work. It is the duty of the prosecutor to present facts establishing the guilt or innocence of one associated with the commission of a crime. A well qualified coroner in the proper performance of his duties should be just as anxious to safeguard the interests of the innocent as he should be in seeking evidence that may establish guilt. This is especially true if his autopsies are performed by a pathologist. In several instances a prosecuting attorney, desirous of maintaining the good will of persons possessing political prestige, has been found to be rather reluctant to institute prosecution of a homicidal character and has been inclined to make light of the conduct of his political associates who were responsible for a death and to allow the matter to drop.

To correct the present system in Alabama a coroner-in-chief could be appointed by the governor after a selection by a committee consisting of the president of the State Medical Association, president of the State Bar Association, professors of pathology and chemistry of the University of Alabama, and the Attorney General of Alabama. This coroner-in-chief would have control of the work of the various county coroners and the laboratories of toxicology. This man would hold office as long as he performed his duties satisfactorily. He would receive a salary of \$15,000 a year, would be trained in pathology, have a working knowledge of toxicology, bacteriology, and photography, and would have experts in these various lines, as well as in ballistics and photogra-

phy. The services of these experts would be available to the coroners and solicitors of each county without additional compensation other than the compensation given to them by the state.

The authority of the coroner in the performance of his duties in Alabama is poorly defined. The laws relative to this office have been made inadequate by changing times. We are living in a "stream-lined" age that has made the "horse and buggy days" of thought and living completely obsolete. We might go so far as to have the Legislature make the office of coroner an appointive one, requiring the appointing power to designate a man of some ability as pathologist to act in the capacity of coroner, or revise the present law incorporating the provision that any one seeking the office must possess certain minimum qualifications. The legislators might be given information that would cause them to strengthen the laws under which the coroners are functioning to the extent that their jurisdiction would be enlarged, their duties more properly defined, and their work performed with a greater degree of authority and dispatch than under the existing inadequate Alabama law.

The office of coroner in these times requires the performance of duties of a highly specialized medical and legal character. As medical men we should take the initiative to launch an educational campaign to impress upon the electorate the necessity of electing to the office of coroner a medical man who has obtained necessary medicolegal experience. Louisiana is the only state requiring all coroners to be doctors of medicine. Mobile county is the only one in Alabama requiring the coroner to be a doctor. The average physician is not qualified to do the work of the coroner.

In Mobile county the coroner is authorized to appoint a "coroner's physician, also a person learned in medicine and licensed to practice medicine in Alabama to be known as the coroner's pathologist." Both positions at present are held by a pathologist, which makes a great improvement in the local situation. Since the resolution was passed by the Medical Society of Mobile County, May 1953, asking that only a duly licensed physician be authorized to hold autopsies and sign death certificates in coroner's cases, the associate toxicologist has not been requested to make an autopsy by the Mobile coroner. In 1931 the Legislature passed an act which abolished the office of coroner in Jefferson county and transferred the powers to the office of the county governing body to be exercised through its appointed agent. As a result of this act, the office of coroner in Jefferson county was made a full-time appointive position subject to the merit system in appointment and compensation. The County Commissioners, upon the recommendation of the Civil Service Board,

appoint the coroner for an indefinite term. In Jefferson county the coroner has two deputy coroners, selected in the same manner as the coroner, and are on a full-time basis.

The press frequently reports the efforts of taxpayers and civic organizations in advocating consolidation of municipal and county governments and centralization of government functions to eliminate duplication of services and to cut down expenses. The same could be done, and with greater efficiency, if the coroner's office could be organized to serve a consolidated or merged territory or as a regional coroner's office, when it would be possible to pay more for persons for the office and be more attractive to the medical profession. This would take care of sparsely settled counties, where a homicide is just as disturbing to the social structure and may demand just as careful work in a just administration of justice as a larger number of similar cases in the large cities.

The modernized coroner's office should investigate all casualty cases, one of the factors being alcohol. Proper investigation would involve the determination of the presence or absence of alcohol in the blood of the deceased driver or drivers of motor vehicles in order to prove or exclude alcoholic intoxication. This work could be done by the laboratories of toxicology which are already established in the state of Alabama.

As stated before, the office of coroner does not seek convictions but supplies medical evidence in a scientific way so that proper authorities can use the information in a fair manner for both sides of the legal procedure. Again I want to emphasize the necessity of a competent examination of the cadaver by a pathologist, who may prove by his examination that an accused person is innocent of the crime for which he is suspected and thereby save him from prison or death sentence. An example can be given where an incompetent examination by a physician led to an erroneous death certificate. The police informed the coroner's physician that the body of a man had been recovered from a kitchen with a leaking gas stove. The coroner's physician, with this history, withdrew a sample of blood for chemical examination which was found negative. A second examination was ordered by the coroner. This time a pathologist made an autopsy and the organs submitted for chemical examination revealed that death was due to a barbiturate. In the meantime, the mother of the deceased man was admitted to a hospital with barbiturate poisoning and confessed to the poisoning of her son. She recovered and was sent to jail instead of to a mental institution and hanged herself in her cell.

A modern coroner's system should have available the scientific aid of pathology, chemistry,

toxicology, dentistry, botany, bacteriology, anthropology, ballistics and photography. S. R. Gerber,¹ coroner of Cleveland, Ohio, states: "Since the coroner deals with highly perishable material, he must be in a position to record permanently and accurately the appearance of a body or organs at the time of examination. Actually, the photographic record supplements and complements, but does not supplant the complete verbal description. Rarely, however, will the words of the individual who describes the signs of injury or disease be as graphic or compelling as a well-made color photograph of the subject." The men chosen to do the pathologic and histologic work must be doctors of medicine, well trained and experienced, who can correlate the findings of others in giving the cause of death.

In cities of over 200,000 inhabitants the coroner's job should be a full-time position. The coroner need not be a pathologist or doctor, but an executive officer of the department, who relies entirely upon his subordinates for the scientific work performed, and in all important cases the coroner should hold the inquest and thereby establish the responsibility or liability for the act which resulted in the untimely death. The investigative work could be done by an experienced policeman loaned to the coroner's office.

I hope some day the public will demand laws in all the states to make it incumbent upon the coroner to be a medical man of ability in the field of pathology. This would probably meet with opposition in some quarters, but it would be of no purpose to have a general practitioner as coroner without adequate training. The framing of the above law should be left to men experienced in the medicolegal field so that there may be uniformity, the statute to define the duties of the coroner definitely and enlarge the jurisdiction. In such law, coroners should have authority to make investigations, hold inquests and conduct scientific autopsies in all cases where death is the result of casualty, violence or undue means, as well as where the deceased had not been attended by a physician in the last 24 hours, or where the attending physician refers a case to the coroner because he was not sure of the correctness of his diagnosis.

The office of coroner would be given more respect and dignity if he were given authority to punish by contempt those who attempt to obstruct the performance of his duties, or fail to testify at his inquests or to respond to subpoenas. From the past conduct of the office of coroner, the public is usually inclined to regard the office with marked

1. Gerber, S. R.; Adelson, Lester, and Johnson, Lawrence: *Medical Radiography and Photography* 32: 15, 1956.

apathy. It is only when one is unfortunately brought into contact with this office due to the loss of a life of a relative or close friend by accident or undue means that one becomes interested in the way in which the coroner's office functions.

Lecturing to clubs, I have found a paucity of knowledge of the duties of coroner and again suggest that the only way voters will realize and understand what the duties and functions of the coroner's office are is by means of education. Only through education by radio, television and the press can one expect to arouse the interest of the public in the coroner's office to such a degree that voters will demand consideration on the part of the Legislature. The intent should be enactment of laws that will modernize and make efficient the standards of the present mediocre office of coroner and eliminate forever the stigma on the medical profession of permitting lay people to give the cause of death in coroner's cases in many instances.

The coroner or deputy coroner must visit the scene of any case of sudden death before the body is removed or any object touched. This is where the police or department photographer should be present. Many signs, objects or clues are discovered bearing upon the case which might otherwise be destroyed or lost. Reports of all work performed should be carefully recorded and typed for future use. Photographs and minute description of the body, teeth, and clothing of unknown dead should be recorded in a special book for this purpose. The experts employed by the coroner and the coroner himself should be called by the court and not be witnesses for the defense or prosecuting attorney. In this way the expert can not be employed by one lawyer to say 0.34% alcohol is not intoxicating and in another case say this amount of alcohol is intoxicating. The primary purpose of the above procedure is to bring out the truth and not hire so-called experts to modify or misinterpret the report to suit the lawyer by whom they are retained. In this way the medicolegal procedures of the coroner would have the greatest respect of the public.

The present law does not require professionally competent personnel nor give proper authority and facilities for the coroner to conduct his investigations. If this were granted, it would not make any difference whether we call the medical man responsible for the system coroner-in-chief or medical examiner so long as the investigations are carried out in the interest of the public welfare.

If solicitors and coroners would cooperate to modernize this ancient office, the recognition of forensic medicine as a specialty would be certain. Few physicians can make an intelligent postmortem; this should be done by a pathologist,

who in turn can not qualify as a medicolegal expert until he has had years of experience in coroner's work or has received special training in this field. This specialty requires a knowledge of both law and medicine, combined with the ability to correlate the facts and principles of each. This has not been properly done in the past, as the medical phase only has been considered. The coroner in the fulfillment of justice must determine the mode and manner of death; there can be no complete separation of the medical and legal implications. For instance, a case is reported by incompetent examiners that the man died from a fractured skull sustained in a fight. An autopsy by a competent pathologist revealed no fractured skull. The proper interpretation is extremely important to the accused and requires medical knowledge. On the other hand, the case of the barbiturate already cited required legal investigation beyond the scope of the medical investigation.

Too often physicians are guilty of signing death certificates where death is said to be due to natural causes when a thorough investigation by one trained in making a diagnosis after death might reveal that death was really due to violence, either accidental, suicidal or homicidal. Non-recognition of murder cannot be blamed upon the lay coroner when he depends upon an autopsy performed by a lay toxicologist, or because he has been given an improper premortem or postmortem diagnosis unintentionally or intentionally by a competent physician. Coroners have accepted the word of an undertaker as to the cause of death, only to be terribly jolted when a report is received of a murder in the case. A man was in an undertaking parlor, the undertaker gave the information to the coroner's physician that the man had died of a heart attack, and a certificate was made out showing that to be the cause of death. On information received later, that a crime was involved, a second coroner's physician was dispatched to the undertaker's place, turned the body over, and found a stab wound as the cause of death.

It is of the utmost importance to industry, insurance carriers, and the public to have a medicolegal inquiry into every death occurring in industry to determine whether the individual died of hazards involved in his occupation. Some physicians are in error in believing that an autopsy of an exhumed body is worthless. If an injury or poison was the cause of death, the exhumed body would still reveal these causes. The gross appearance of the organs may be altered but, if not too long buried, the pathologist and toxicologist working together can arrive at the cause of death. Carbon monoxide hemoglobin has been found after burial of one year, mercury bichloride after four years, and arsenic and lead in the bones after fifteen years.

CONCLUSION

1. Before we can have adequate medical examinations of sudden and unexpected deaths in Alabama, we must have the interest and understanding of the entire medical profession aroused to accept their social responsibilities, both as organized groups and as individuals.

2. The practice of coroners to permit a lay person to hold a postmortem upon a human body is not only sacrilegious but malicious mutilation of the human body.

3. If suicides are not properly investigated, the opportunity would be provided to have homicides appear as suicides. Non-recognition of murder by a lay coroner cannot be blamed upon him when he takes the word of an unqualified person in making the improper diagnosis postmortem.

4. The coroner's investigation should make a permanent record of the identity of the dead per-

son, how long the person has been dead, if he died of violence, was it self-inflicted, accident or murder. If the person was murdered, the information should be given to law enforcement officers, who should deduce, from the circumstances reported and the postmortem examination, facts that will aid in the apprehension of the person or persons responsible for the death.

5. Knowledge of the specialty of pathology does not qualify a doctor as a medicolegal expert, as the latter is related to the former, but requires a large clinical experience, with the additional qualification of being familiar with legal proceedings.

6. With a modernized law, the value of the coroner would be established as an agent for justice not only in criminal cases but also as a "radar" of public health and safety. Let the medical profession take the initiative and demand a change in this ancient office of coroner.

ARSENIC THE OBSCURE

C. J. REHLING, PH. D.

State Toxicologist

Auburn, Alabama

As early as the first century A. D., Dioscorides, originator of *materia medica*, classified known poisons into animal, vegetable, and mineral groups. In the mineral group he listed arsenic, cinnabar, litharge, and white lead. Thus arsenic has been long recognized and history has continued to confirm its use as a deadly poison through the centuries.

In spite of the availability of more potent and faster acting poisons developed in the last hundred years by the chemical sciences, the words poison and arsenic continue to be more or less synonymous, at least in the minds of that element of the population bent upon homicide by poison. Other poisons occasionally find use for such purpose in Alabama, but are quite well overshadowed by the popularity enjoyed by arsenicals.

Developments in the course of a current poison investigation again identify several homicides perpetrated by administering arsenic. This is the third such episode brought to light by law enforcement agencies of Alabama within five years. It seems significant that in each of the multiple homicide episodes some of the victims were hospitalized, with ample observation, but their true condition was never suspected. Previously, several members of another family died from arsenic poison, and these also were patients in a leading hospital in Alabama during their fatal illness but their true condition escaped identity until some

time after death. Prosecution could not be initiated in that instance for other reasons.

Why does arsenic poisoning escape medical attention? Certain answers or comments were rather forthrightly presented in the facts brought to light in the investigation of the above criminal cases. A summary of each case is presented for review, with special reference to the background and clinical picture.

Case 1. The sudden illness of a white female, age 3, coincided with the visit of an aunt by marriage. A portion of two different soft drinks had been consumed by the child immediately before the acute onset of vomiting and retching. The child was taken to a local hospital where death ensued some five hours after ingestion. Suspicions of the parents, followed by a physician's observations and conclusions of poisoning, resulted in a full investigation and identification of death by sodium arsenate added to the soft drinks. The suspected aunt was tried, convicted, and sentenced to death, which sentence was carried out.

Circumstances surrounding this child's death, together with symptoms of the poisoned victim, caused the parents to recall the loss of another child some three years before. The onset of illness began with a visit of this same aunt to the home, followed by symptoms of acute gastric upset in the victim, aged 4. Hospitalization, with some five days of continued symptoms, was followed by

death. The illness was attributed to "ptomaine poisoning" and "locked bowels."

This earlier death was not suspected even by medical attendants, in all probability due to the almost identical early symptoms of infectious gastroenteritis and the symptoms of arsenic poisoning. Exhumation and toxicologic studies of this body identified arsenic poisoning three years after death.

Case 2. The near-paralyzed condition of a 28-year-old male in a Veterans Administration Hospital was ultimately identified as arsenic poisoning by spectrographic analysis of head hair in early 1956. This finding launched a comprehensive investigation of prior deaths of six members of this family, which deaths occurred over a period of 19 years. All but one of these deaths were attributed to various natural causes of undetermined etiology by attending physicians. Several of the victims were hospitalized patients during their terminal illness. One of the six deaths was ascribed to accidental poisoning, based solely upon the story given by the mother who perpetrated the crimes. This accidental death was not reported to the coroner in order that the first step of an investigation could be initiated.

Again, infectious causes were ascribed in these cases based upon symptoms and the possibility of chemical poisoning was never considered, although the *symptoms were also characteristic of arsenic poisoning.*

Exhumation and extensive toxicologic analyses identified each of these six deaths as resulting from arsenic poisoning. The mother of these children was convicted of the death of her last deceased husband, sentenced to death, and the sentence was carried out only recently.

Case 3. Recent weeks have witnessed another multiple poisoning incident perpetrated with arsenic in connection with an insurance scheme. This case came to the attention of authorities when the ten-year-old son of the suspect and mother died of confirmed natural causes immediately after a life insurance policy was markedly increased. Poisoning was suspected and investigation made, but no chemical poison could be identified. Pathologic studies confirmed death from natural causes.

The insurance investigation gave rise to suspicion regarding other deaths to which this suspect was connected by various circumstances. The several deaths thus far identified again reveal the usual sequence of gastro-intestinal symptoms of sudden onset, and where death did not ensue in a few hours, the common neurologic symptoms appeared in due time. Patients received medical attention and such natural causes of death as infectious diarrhea are found listed on the death certificates.

Exhumation and toxicologic analyses to date have identified several of these deaths a consequence of arsenical poisoning. Several of the surviving patients have been identified by urine tests as suffering from arsenic intoxication.

In each of these three episodes of multiple homicide the true etiology was overlooked while there was ample opportunity in most instances to identify, by rather simple clinical tests, the true nature of the illness. Objective symptoms are valuable but they are only rarely definitive and singular in their identity of the true cause. Hence, laboratory tests are so frequently necessary to round out the picture and permit a reliable diagnosis.

The commonly encountered gastro-intestinal upset in its various degrees and forms is associated with infections and other causes, *and with some chemical poisons.* Apparently, it is the fact that these symptoms are common to many ailments *and metallic poisonings* that accounts for the invariable diagnostic conclusion of infectious gastritis because the physician is usually not the suspicious sort. Yet he is inherently aware and readily identifies the ersatz complaints of a malingerer, or those of the hypochondriac. His suspicions should include the documented fact that accidental and homicidal poisonings do occur, though not frequently, and that symptoms parallel those of infectious gastritis, followed in time by neurologic involvements in chronic cases.

Commonly classified as a cumulative poison, arsenic is excreted in the urine and feces for some weeks after ingestion of a toxic dose. It appears in the urine within a few hours, and rather simple, sensitive toxicologic tests can be readily performed in a laboratory to identify even very minute amounts. Diagnosis is therefore almost as simple as diagnosing a diabetic condition with the urine sugar test. The Gutzeit test, or some modification thereof, is set out in textbooks of clinical laboratory procedure, and in standard toxicology texts, for the identification of arsenic. The same procedure lends itself well to both qualitative and quantitative determinations.

Medicine Cabinet Dangers Listed—Is your medicine cabinet typical of those found in most American homes—a catchall for potions, ointments, pills, salves, sprays, and a countless variety of other medications and sundries? If so, this may be a potential hazard to you and, more particularly, your children.

Writing in the March issue of the American Medical Association's *Today's Health*, Dr. Donald A. Dukelow said this assortment of drugs and chemicals can be dangerous.

The doctor added, "In the rush of an emergency or when sick or sleepy, it is possible to be poisoned or burned by chemicals picked up by mistake."

He advised that "A medicine cabinet—or shelf or drawer—should be used for medicine only. Cosmetics, toothpaste, and shaving materials should be available for easy use without having to hunt for them among pill boxes and bottles."



Editorials

DECLARATION OF GENEVA

In September 1948 there was adopted by the General Assembly of the World Medical Association at Geneva, Switzerland, a new pledge for physicians, to be entered into at the time of being admitted as a member of the medical profession. With medical colleges throughout the country graduating many young physicians, it seems timely to reemphasize this pledge.

I solemnly pledge myself to consecrate my life to the service of humanity;

I will give to my teachers the respect and gratitude which is their due;

I will practice my profession with conscience and dignity;

The health of my patient will be my first consideration;

I will respect the secrets which are confided in me;

I will maintain, by all the means in my power, the honor and the noble traditions of the medical profession;

My colleagues will be my brothers;

I will not permit considerations of religion, nationality, race, party politics or social standing to intervene between my duty and my patient;

I will maintain the utmost respect for human life, from the time of conception; even under threat, I will not use my medical knowledge contrary to the laws of humanity.

I make these promises solemnly, freely and upon my honor.

THE OUTLOOK IN DIABETES

Although diabetes is still incurable, it is no longer the threat to life that it used to be, Health Information Foundation reported recently.

In the February issue of its monthly statistical bulletin, *Progress in Health Services*, the Foundation recalled that "forty years ago, a medical diagnosis of diabetes was the equivalent of telling a patient he would soon die."

"Nowadays," HIF continued, "thanks to improved insulin and more recent therapeutic de-

velopments, a diabetic who receives proper and continuing treatment can look forward to years of almost-normal life."

As the bulletin points out, diabetes is a disease in which the body's ability to derive energy from sugar and starches is impaired, chiefly from a reduction in the supply of insulin produced by the pancreas. As a result, there is a loss of weight and strength, and death may come from the other more serious accompanying conditions that often set in.

Diabetes mortality hit its peak in this century in 1940, when the death rate reached 26 per 100,000 persons. Since then it has declined to about 16 per 100,000 population in 1957. Even so, according to HIF, diabetes ranked eighth among the leading causes of death and was responsible for an estimated 27,000 deaths or 2 per cent of all fatalities last year.

The bulletin shows that, although diabetes mortality has declined, the incidence of the disease has risen. There are many more known diabetics now than 20 years ago. In addition to the million known to have diabetes, perhaps a million more are unknowing victims, the Foundation said. Furthermore, some 4,750,000 people alive today will develop diabetes during their lifetime.

Diabetes today is largely a disease of middle and old age. Improvement has been greatest for individuals under 45 years. After insulin was introduced in 1921, for example, the death rate for this age group fell from 5.5 to 3.5 per 100,000 in the space of two years. But for those over 45, diabetes mortality continued to rise until recently.

Diabetes, HIF points out, is the only major cause of death that takes a heavier toll of women than men.

Despite its remarkable success in controlling diabetes, science knows little about the disease. Apparently it is not inherited, but a predisposition toward diabetes probably is. Life insurance studies shows a definite link between diabetes deaths and overweight, the Foundation added. Also family history (patterns of nutrition, etc.) is involved. Some believe that inability to cope successfully with the strains of modern life may also play a role, and that increasing income and food consump-

tion, sedentary occupations, urbanization and industrialization may be implicated.

The development of improved insulin and a synthetic orally administered compound which lowers blood-sugar levels for some patients are the latest results of science's increasing efforts to wipe out diabetes as a cause of death.

"Our recent progress against diabetes is only half the story," the Foundation cautioned. "Better control of this disease depends more and more on early detection and treatment. And the first step in that direction is for the American public to become convinced that preventive medicine is an essential requirement for health."

STATEMENT ON ANIMAL EXPERIMENTS BY STUDENTS

(Adopted by the Board of Directors of the National Society for Medical Research 11th Annual Meeting, Chicago, February 11, 1958)

Much of man's progress depends upon increased understanding of the phenomena of life. The study of life is the foundation of agriculture, medicine, and even the social sciences. Therefore, the development of skilled biological scientists is very important to the fate of mankind.

The student in biology studies living things. It is possible, of course, to learn some things about biology from books just as it is possible to learn some things about swimming from books. But one cannot become a biologist in a library any more than one can learn to swim without water. First-hand acquaintance with the subject is the key to proficiency in any field.

Students studying living creatures seldom lead the world to new discoveries, but direct contact with life does deepen their understanding and their fascination. To say that students must be able to make revolutionary discoveries before making their first direct observations in biology is like saying that a person should not practice swimming until he is a championship swimmer.

The policy recommendation of the National Society for Medical Research is that interest in the infinite mysteries of life processes should be encouraged—not discouraged. Youngsters should be encouraged to explore nature first hand. They should be encouraged in any interest they might have in raising, caring for, and learning about plants and animals. This interest and talent in biology is urgently needed for tomorrow's jobs in all of the biological sciences.

Humane consideration must, of course, be given to all animals studied. Toward this end the National Society for Medical Research prepared two years ago for the Science Clubs of America the following rules governing the care of experimental

animals. The National Society for Medical Research strongly favors animal studies by students when conducted in accordance with these humane principles.

1. The basic aim of scientific studies that involve animals is to achieve an understanding of, and deep respect for, life itself and for all that is living.

2. A qualified adult supervisor must assume primary responsibility for the purposes and conditions of any experiment that involves living animals.

3. A trained biological scientist, physician, dentist, or veterinarian must directly supervise any experiment that involves anesthetic drugs or surgical procedure.

4. Experiments on living animals shall be limited to the use of invertebrates, other non-mammals, and such small mammals as mice, hamsters, guinea pigs, or rabbits. An exception to the above rule is in the case of farm animals, in which case the rules of the local 4-H Club shall be followed. No experiment shall be conducted that involves infection with pathogenic organisms or obviously mutilating surgical procedures, unless the animal is humanely disposed of at the end of the experiment. Any such experiment must be performed with the animal under appropriate anesthesia if pain is involved, and the experiment must be of the briefest possible duration.

5. The comfort of the animal used in any study shall be a prime concern of the student investigator. Gentle handling, proper feeding, and provision of appropriate sanitary quarters shall at all times be strictly observed. Any experiment in nutritional deficiency may proceed only to the point where definite symptoms of the deficiency appear. Appropriate measures shall be taken to correct the deficiency, if such action is feasible. Otherwise, the animal must be humanely disposed of.

6. Students shall not be permitted to participate in science fairs held under the auspices of Science Clubs of America until their adult sponsors have submitted assurance that the above rules shall be observed.

FREEDOMS FOUNDATION AWARD

A Freedoms Foundation Award for outstanding contribution to Americanism during 1957 has been won by the Blue Cross Commission of the American Hospital Association.

The award, a bronze medal cast in honor of George Washington, was made to the Blue Cross Commission for its program encouraging the use of discussion as a learning and educational tool in the nation's schools. It was announced during

ceremonies at Valley Forge on Washington's Birthday, February 22.

Backbone of the Commission's program for schools is in the practical application of discussion as "an old American custom we use every day." Illustrating this for classroom use is a kit containing a series of color charts, a guide to teachers in leading group discussion, and a system of evaluating class participation. Kits, along with supplementary educational material, are now being used in thousands of elementary and high schools and universities.

Richard M. Jones, director of the Blue Cross Commission, said, "We feel it is part of the Commission's responsibility to the civic and educational life of our nation to emphasize the freedom we enjoy in exchanging ideas and to help define what that means. Blue Cross is dedicated to the interest of the community and the school program we have initiated is tangible evidence of our community role. The Commission is honored by its selection as a Freedoms Foundation award winner."

Freedoms Foundation of Valley Forge is a non-sectarian, nonprofit organization endowed voluntarily by business, industry, service groups and individual contributions to sponsor an annual program of Americanism awards. This year, the Foundation's impartial 30-man jury selected from community clubs, civic organizations and state supreme courts, had 40,000 entries from which to choose. Nationwide, there were 700 award winners.

The George Washington Honor Medal will be presented to the Blue Cross Commission at a regional ceremony in Chicago this spring.

MEDICAL EXHIBIT PROGRAM ANNOUNCED

An historic program in the field of medical research and communications has been announced by the Student American Medical Association.

The program aims to encourage medical students, both as assistants to faculty members in important medical research today and as investigators tomorrow, to report their acquired knowledge within the profession through the medium of the scientific exhibit at outstanding medical conventions.

All interns and residents are also eligible for a special award.

For the first time the annual Student American Medical Association convention to be held this year in Chicago from May 1-4 will have a scientific exhibit section. The section will consist of 17 exhibits.

With the support of Lakeside Laboratories, Inc., ethical pharmaceutical firm of Milwaukee, the

Student American Medical Association is launching a competitive program, open not only to undergraduate medical students throughout the country but to interns and residents as well.

Medical students are offered the opportunity not only to present their exhibits at the convention to attending medical students and physicians but also to win prizes of \$500, \$350, and \$250, respectively.

A separate award of \$500 is offered to an intern or resident whose exhibit is judged the most significant contribution.

The Student American Medical Association has established both an advisory committee of students and medical educators in Chicago and a panel of judges who are outstanding authorities in various medical fields.

In addition to the cash awards offered by Lakeside, the two \$500 winners this year will also enjoy a free trip to San Francisco in June where they will show their exhibits at the annual convention of the American Medical Association.

It is expected that many students who are presently working in research projects with their faculty members, as well as interns and residents, will apply to the Student American Medical Association describing their research projects and the exhibits they plan.

Exhibit subjects may be devoted to original research: synthesis and analysis of many investigations in a particular field; or subjects of special educational value to new physicians.

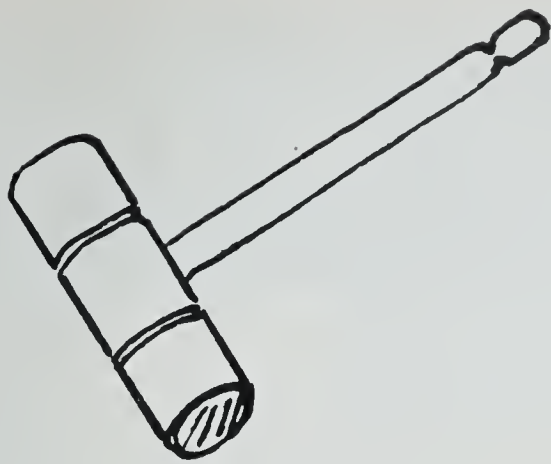
Applications may be obtained from Mr. Russell Staudacher, Executive Secretary, Student American Medical Association, 430 North Michigan Avenue, Chicago 11, Illinois.

MEETING OF HEART ASSOCIATION

A special one-day conference on Heart Disease will be held in the auditorium of the Liberty National Life Building, 301 South 20th Street, Birmingham, Sunday, May 18. The meeting will begin at 9:45 A. M. and will conclude at 3:45 P. M.; and there will be no registration fee.

Those who will contribute to the program are Dr. Tinsley R. Harrison, Birmingham, who will discuss the Differential Diagnosis of Chest Pain; Dr. Albert Brust, Cincinnati, whose subject will be Hypertension; Dr. W. Sterling Edwards, Birmingham, who will deal with Recent Advances in the Diagnosis and Treatment of Vascular Occlusive Diseases; and Dr. Thomas M. Blake, Jackson, Miss., who will discuss Atherosclerosis.

An interesting feature of the meeting will be question and answer periods in both the morning and afternoon sessions.



President's Page

In this jet age, time moves so fast; and I find this will be my last "President's Page" article. From the vast amount of information which has crossed my desk I have tried to select subjects which are daily problems in our practice. Some were controversial. I have received little comment and discussion of any of these subjects. Apparently each of us has such a full schedule each day that there is little time left for reading or a follow through on any of the problems confronting medicine today. I am guilty of doing less than I should on a county, state and national level.

The American Medical Association, through the Washington and Chicago offices, has certainly kept me fully informed on all of the problems of the A. M. A. The weekly newsletters are up to date in thinking and acting and I must commend the editorial staff on the brief, concise manner in which they present medical information from all parts of the U. S. A. All of our requests for material for our state committees have been answered promptly. We have been able to accumulate quite a library of our own in the Public Relations office.

I have just received a copy of a letter from our Legislative Committee to Senator Lister Hill commending him on his many activities and interests in the field of medicine during his period in office. I have long felt that our representatives in the National Congress should frequently be consulted by some member or members of our Association. They respect our position and interest. This would be in the province of the Legislative Committee, and with rotation of the chairman each year the attitudes and expressions from our Association would be up to date. I hope closer liaison will be maintained with Washington.

The question of Social Security for physicians is making a sharply divided line of opinion throughout the United States. It appears now that the final decision will have to be supplemented at the state level. During the past year this question has brought varied opinions from members of our Association with whom I have talked but most thinking seems to be with the A. M. A.

The vast amount of publicity in our state during the past five years on court cases that have required a coroner's opinion emphasizes the need

for better laws in this field. There are certain attitudes in the courts, among the lawyers and the public which will make the passage of an adequate coroner's law difficult, but our Association should definitely put forth effort to get an adequate law passed in the next five years.

On another page in this issue of the *Journal* is the latest information released by the National Information Bureau, Inc., giving fund raising information for National Health Agencies. I believe our Association members support all of the fund raising agencies without much information about how the funds are expended. If any organization, trying to raise funds, has a health or heart appeal its drive is usually successful. Many articles have been published in recent months exposing methods of expending money raised on a heart appeal. I hope through our *Journal* we can be informed at least once per year about how the various campaigns we support spend their money.

Blood banks are a part of the responsibility of County Medical Societies. Through the many articles appearing in newspapers and magazines each month the public feels that miracles can be accomplished now days in medicine and surgery. Blood is an essential part of hospital supplies. Unless physicians attach importance to blood giving and try to stimulate interest of the public, we will continue to have critical periods of blood shortage in our hospitals.

I hope our meeting in Montgomery, April 17, 18, 19, will prove interesting and instructive. We have varied the program in several respects which we hope will create greater interest. We hope to see all of you at the meeting.



ORGANIZATION SECTION

REPORT OF THE COMMITTEE ON PUBLIC RELATIONS LIAISON WITH ALABAMA DENTAL ASSOCIATION

The Inter-Professional Relations Subcommittee, headed by Dr. J. G. Daves, Cullman, met with the Liaison Committee of the Alabama Dental Association on February 20, 1958 in Birmingham for the purpose of discussing problems of mutual interest.

After a lengthy discussion, it was the general consensus of the group that meetings of this type were good for both professions and that an attempt should be made to establish such meetings as an annual and continuing project.

Following are points which the joint committee felt should be recommended to the parent organization of each profession for consideration:

1. In very near future, interchange of participants on annual program of each group.
2. The two professions in each county get together for social hour and discuss problems.
3. Dentists should have courtesy privileges on hospital staffs.
4. Maintain a permanent joint liaison committee to meet annually and to be staffed with co-chairmen with power to appoint alternate members when regular members are hindered from attending.
5. When problems arise, co-chairmen to call an interim session if the problem is of such urgent nature as to merit such.
6. In larger counties—Jefferson, Mobile, Montgomery—both professions set up local liaison committees.

MEDICAL ASSISTANTS COURSES

More than 350 medical assistants in Alabama have enrolled in introductory courses for medical assistants which are currently being conducted or recently have been completed in the six University of Alabama Off-Campus Centers, as well as in Florence and on the University of Alabama campus.

These courses are sponsored by The Medical Association of the State of Alabama, the University of Alabama Extension Division, and the respective County Medical Society.

Plans are to search out other areas of the state

where a sufficient number of medical assistants manifest an interest, with an idea toward filling their needs in this respect.

TV SPOTS

Dr. E. B. Glenn, Chairman of the Mass Media Subcommittee, has reported that a series of twenty—30 and 60 second TV spots were nearing completion and should be ready for distribution to Alabama TV stations by early April. Previous plans called for completion by March 1, but because of mechanical difficulties, production was delayed for about three weeks.

The films are being produced by the Broadcasting Services of the University of Alabama. Each spot deals briefly with a health subject and it is the opinion of the Committee on Public Relations that these films should contribute greatly to preventive medicine.

Non-Habit-Forming Tranquilizer—No habituation to the tranquilizer meprobamate developed among 60 state prison inmates given the drug during a recent study.

The results were contrary to expectations, according to an article by Dr. Austin R. Stough, McAlester, Okla., in the Feb. 22 Journal of the American Medical Association.

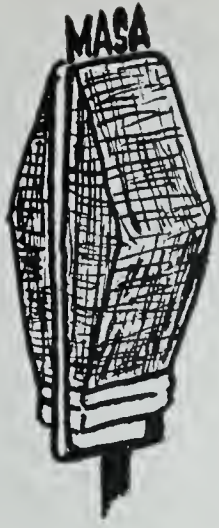
"Because meprobamate (Miltown, Equanil) is widely used, it was considered desirable to evaluate the possibility of habituation among a prison population, in which a high incidence of susceptibility might normally be expected," Dr. Stough said.

The Oklahoma state prison inmates given the drug were considered to be highly unstable, with a history of injury, illness, or other physical or psychologic abnormality. Several had once been addicted to narcotics or alcohol. Yet during the study none developed a "true habituation" in which they became physically or psychologically dependent on the drug.

In the current Oklahoma study the drug was given in two separate six-week tests. The first called for meprobamate to be administered in dosages far in excess of amounts needed to allay symptoms, followed by abrupt withdrawal.

During the second phase, the drug was given in dosages more commonly used followed by gradual withdrawal.

Results of both tests showed that the patients had returned to pre-treatment status within 48 hours after withdrawal, including recurrence of previous psychosomatic symptoms from illness, Dr. Stough said.



ASSOCIATION FORUM

COUNTY MEDICAL SOCIETY ACTIVITIES

The American Medical Association has released a report of the 1957 Nationwide Survey on County Medical Society Activities. It covers the period from June 1955 to July 1957 and the information was taken from questionnaires returned by 986 of the 1915 organized county medical societies throughout the country.

The report classifies societies into six groups according to membership. Alabama county societies fall in the following groups:

- Group 1—up to 15 members—43
- Group 2—15 to 49 members—18
- Group 3—50 to 99 members—3
- Group 4—100 to 199 members—1
- Group 5—200 to 299 members—1
- Group 6—300 and more members—1

Excerpts from the A. M. A. report are printed herein, with emphasis on the first two groups which cover approximately 90% of the societies in Alabama. A study of the survey report should provide information which will prove valuable to the membership in planning society activities in the future.

REGULAR MEETINGS

In the total figures for all groups, almost three-fourths of the societies showed preference for monthly meetings. Approximately 52% in Group 1 and 71% in Group 2 reported that they held regular monthly meetings; quarterly meetings ranked second.

REGULAR MEETING PROGRAMS

Broader interest in the socio-economic aspects of medicine has led to an increase during the last two years in the amount of time devoted to problems of that nature at county medical society meetings. However, both large and small societies seem to favor meetings featuring scientific material. Groups 1 and 2 were fairly close in budgeting their time, percentage-wise, among business, scientific or socio-economic activities. Combining Groups 1 and 2, 254 societies report that less than $\frac{1}{3}$ of the meeting program is devoted to business, 237 report $\frac{1}{3}$ to $\frac{2}{3}$, and 70 societies report more than $\frac{2}{3}$ of the time is so used. In the other cate-

gories, the greater number report $\frac{1}{3}$ to $\frac{2}{3}$ time for scientific, less than $\frac{1}{3}$ for socio-economic and less than $\frac{1}{3}$ for other matters.

TOPICS THAT DRAW BEST AT MEETINGS

Most medical societies report that well known speakers draw best at meetings. Some societies specify that they prefer speakers from outside the immediate area—that is, “prestige speakers.” Surgical or medical programs draw well, as do meetings concerning elections, medicolegal problems, PR and those in cooperation with the woman’s auxiliary. Several societies mentioned that elections prompt a good membership response.

In Groups 1 and 2, the greatest number indicated that well known speakers draw best. Group 1 rated surgical or medical topics second and dinners or social programs third; Group 2 reversed the rating of these two types.

TOPICS THAT DRAW LEAST AT MEETINGS

In the total figures for all groups, nearly half of the societies report that programs with highly specialized material or material of interest to a minority of doctors is poor programming. Philosophical topics or talks on theoretical science continue to be poor attendance-getters. Groups 1 and 2 gave “highly specialized” first place and “business” second place on this question. Group 1 placed socio-economic in third place and films fourth; Group 2 reversed the order of these preferences.

SCIENTIFIC PROGRAMS

In addition to regular meetings, society members attend other programs of a scientific type. In the total for all groups, 799 of the 986 societies indicate that members attend some kind of postgraduate education courses—a good many of them sponsored by other county societies, by regional or state societies, or by hospitals. Clinical institutes and telephone lectures, as well as seminars and tape recordings, are also popular. Approximately 75% of Group 1 and 85% of Group 2 report that members attend postgraduate courses.

AVERAGE ATTENDANCE

Over-all attendance at meetings has remained about the same as that reported by all groups in the 1955 survey report. The largest percentage

of attendance is in the smaller groups where doctors possibly have fewer organizations competing for their time and where transportation may be less complicated than in metropolitan areas.

In Group 1, the greatest number report average attendance at 75% to 100%. Group 2 replies show the greatest number reporting 50% to 74% average attendance.

CHANGE IN ATTENDANCE

The attendance picture has not changed appreciably in the last two years. About the same number of medical societies in each membership group as in 1955 report an increase in individual attendance at meetings. The majority of the societies replying in Group 1 report no change in attendance; the majority of those replying in Group 2 report increased attendance.

COMMITTEES

Of the 17 listed standing committees established in all groups, the most prevalent are concerned with public relations or public service, legislation, civil defense, public health, professional relations and school health. These standing committees form the backbone of the medical societies' regular activity in these fields and they are the mechanism through which liaison is carried on with outside groups as well as within the society itself.

Group 1 reports the greatest numbers of committees under the headings of Public Health, Public Relations or Public Service, and Legislation, with Chronic Illness and Geriatrics at the bottom of the list. Group 2 ranks Public Relations or Public Service first, with Civil Defense in second and Legislation in third place. Chronic Illness and Rehabilitation are reported by this group as the smallest number of committees.

TELEPHONE ANSWERING SERVICES

In the total for all groups, two hundred-eight societies sponsor telephone answering services. These services are needed more and found more often in the societies with larger memberships—particularly those in metropolitan areas. In addition to telephone answering services maintained on an organized basis, doctors in the smaller communities use various means of keeping in touch with their offices, hospitals or one another: two-way car radios, mobile phones, code numbers for paging doctors in public places, etc. Approximately 7% in Group 1 and 16% in Group 2 report that they use a telephone answering service.

EMERGENCY CALL PLANS

Approximately 38% in Group 1 and almost 50% in Group 2 report that they have an emergency call plan, the majority in both cases being hospital operated. More than one-half of the total groups reporting have formal plans for answering emergency calls. The rest of the societies have some

method of handling such calls—arrangements are generally made between doctors themselves on an informal basis or calls are answered from a rotation list kept at the local hospital. As is to be expected, the informal plans work satisfactorily in the smaller societies.

GRIEVANCE COMMITTEES

Approximately 23% in Group 1 and 60% in Group 2 report that they have a system of handling complaints from the public. The percentage reporting such committees increases as membership increases, with Group 6, the largest membership group, reporting 100%. The majority report that all types of complaints—not only fee disputes between doctors and patients—are considered. These systems or committees—which carry a number of different names, including grievance, mediation, professional liability, ethics, etc.—offer doctors, patients or any party with a valid interest a way of airing and adjusting their misunderstandings. In some cases, the local society may refer disputes to state or regional boards or committees.

COLLECTION AGENCIES

The larger medical societies are more likely to own or sponsor collection agencies to handle overdue bills for their members. In the smaller societies, physicians generally handle the collection of their own bills or use local commercial agencies. Nine of the 241 societies replying in Group 1 and 33 of the 344 societies replying in Group 2 report that they use collection agencies, the large majority being commercially owned.

BUDGET PLANS FOR PATIENTS

There has been an increase in the number of medical societies that make available a plan by which patients may budget for medical costs. Group 6—the largest membership group—maintains the largest number of such plans. Only 7 societies in Group 1 and 6 societies in Group 2 report that they have a budget plan for patients.

FEE SCHEDULES

There has been a rise in the number of average or usual fee schedules adopted or approved by medical societies. These schedules which set forth the charges generally made for certain standard medical procedures, are usually recommended only as a guide to establishing fees. Of the nearly 500 societies reporting (all groups) the existence of such schedules, 128 mention them in printed material distributed to the public (newspaper advertisements, brochures, welcome wagon booklets, etc.) A total of 137 county societies in Group 1 report that they have an average or usual fee schedule; 38 report that it is publicized. One hundred seventy-seven in Group 2 answered this question in the affirmative, 46 reporting that the fee schedule is publicized.

MEDICAL CARE FOR ALL

Combining all groups, nearly 400 medical societies report that they publish some sort of public statement guaranteeing medical care, regardless of the patient's ability to pay. Generally, such statements are carried in newspaper advertisements printed in the interests of public service, in material at health fairs or exhibits, or in booklets describing medical facilities and services in the community.

Almost one-half of the county societies reporting that they state publicly no one need do without services of a physician are in Groups 1 and 2.

PR PUBLICATIONS

Only 1 society in Group 1 and 11 societies in Group 2 report that they publish PR material. However, in line with the increased interest of medical societies in public relations, there has been an upswing in the amount of material published by all societies dealing specifically with PR projects and programs. In the main, this information is carried monthly in the society's regular bulletin in the form of committee report. Some societies provide their members with regularly scheduled newsletters reporting on PR activity. The greatest amount of public relations material is printed by societies in the larger membership groups.

FILMS

Combining all of the groups, more than two-thirds of the societies reply that they use films on their programs. Most of these societies schedule from one to five films per year—usually sponsored by pharmaceutical companies. The medical societies are about split on whether they object or not to a product tie-in, if done in good taste, on films supplied by pharmaceutical firms. More than one-half of Group 1 and about two-thirds of Group 2 report that they use films.

INDOCTRINATION COURSES

Formal courses to indoctrinate society members in the privileges and responsibilities of membership and in the services offered by the society are increasingly popular. Many of the courses include such topics as the economics of medical practice, the doctor-patient relationship, ethics, legislation and insurance. Usually these indoctrination courses are in the form of one-day or half-day programs that include lectures and demonstrations.

Approximately 5% of Group 1 and 10% of Group 2 report that they have indoctrination courses.

PROBATIONARY PERIODS FOR NEW MEMBERS

About one-third of the societies reply that they have a minimum period of time required for applicants prior to acceptance as full-fledged society members. These probationary periods generally run either six months or one year.

PHYSICIANS' ASSISTANCE PROGRAMS

The largest number of physicians' assistance programs is shown in Group 6—the larger-budget county societies with the larger memberships. In most cases, however, special funds are available to physicians, their widows and families, through state-sponsored and state-operated fund programs. Several small societies noted that they took care of needy physicians in their localities on a personal basis.

In Group 1, no organized aid was reported. In Group 2, four societies answered in the affirmative on Aid to Physicians, two affirmative on Maintain Physicians' Home, and ten affirmative on Aid to Physicians' Widows and Families.

MEDICAL ASSISTANTS

No longer in the experimental stage is the medical assistants or medical associates program. During the last two years a steady increase has been noted in the total of such groups. Many of the medical societies offer program aid, financial assistance or their official approval to the training courses. However, since medical assistants have developed their own groups on a national as well as a local level, there has been a natural decrease in the number of courses under the direct sponsorship of medical societies.

Groups 1 and 2 report as follows:

	Group 1	Group 2
Societies Replying.....	241	344
Have Medical Assistants Group in the Area.....	18	35
Society Offers Program Assistance.....	8	18
Society Offers Financial Aid.....	5	8
Group Has Society Approval.....	12	22
Society Sponsors Training Courses.....	2	7

WOMEN'S AUXILIARIES

County medical society members often work closely with their women's auxiliaries in sponsoring community programs, essay and poster contests, health days, etc. More than one-half of the county societies indicate that they maintain a strong and constant affiliation with women's groups. Some societies arrange their regular meetings to coincide with auxiliary meetings. Almost one-third in Group 1 and almost one-half in Group 2 report that the society works with the medical auxiliary.

PUBLIC EDUCATION PROJECTS

In addition to providing medical services, many societies recognize the need to interpret these activities for laymen. The methods by which this information reaches the public includes almost all forms of printed and spoken communication: Speakers Bureau, Health Forum, Health Fair, Fair Exhibit, Health Day, Health Column in Local

Press, Local "Welcome Wagon" Program. Speakers Bureaus rate highest on the list. Health forums, usually in cooperation with the local newspaper or radio station, and society exhibits at local or state fairs are also popular, as are liaison programs with local "welcome-to-newcomers" community agencies.

PRESS, RADIO AND TV

Also in the field of public education are the cooperative programs with local newspapers and the radio and television programs sponsored by or participated in by medical societies. Often, societies enter into codes of cooperation with these communication outlets. About one-fourth in Group 1 and one-half in Group 2 report that the society sponsors a local press code. The average for all groups reporting is a little less than one-half. County societies also sponsor regular medical shows over the radio and TV stations in their areas—usually these are panel discussion or interview-type programs. Some societies use films or recordings supplied by the AMA or state societies for use over local stations.

COMMUNITY PROJECTS

Cooperative programs carried on within the community framework are an important link between the medical society as a unit and non-medical groups. One program that has gained popularity in the last few years is the science fair for students in local high schools. Another is Medical Education Week, a program to acquaint the public with the role of medical schools and their progress. An overwhelming number of societies participated during the last year in a campaign to inoculate the public against polio. Also, medical societies work with local organizations in guiding the development of safety programs specifically concerned with traffic, poisons and industrial and farm accidents. With the exception of the polio inoculation campaign which has been mentioned, participation in the various programs by the six groups is fairly evenly distributed.

SCHOOL HEALTH PROGRAMS AND ESSAY AND POSTER CONTESTS

Medical societies have long been active in programs designed to protect the health of students. They continue to encourage health maintenance programs in schools and are active in supporting, usually through the cooperation of their auxiliaries, school essay and poster contests on health topics.

Approximately 70% in Group 1 and 73% in Group 2 report that the society cooperates in the school health program. The average participation in this program for all groups reporting is approximately 70%.

SOCIETY MEMBERS ON OFFICIAL BOARDS

Individual doctors demonstrate civic pride and their personal interest in the communities of which they are a part by representing the medical profession on local government boards and in organizations set up to protect the health of the public. According to the replies, the majority of their groups are also members of official bodies such as school, public health, welfare and government.

More than one-half of Group 1 and Group 2 report that the society has members on health department boards, and a little less than one-half list memberships on school boards.

HEALTH COUNCIL PARTICIPATION

An established program for county medical societies is their participation in local health councils. These councils act as coordinating agencies and serve as a clearing house for all community health activities.

About 30% in Groups 1 and 2 report a health council on either a citywide or a countywide basis.

CENTRAL OFFICES

The percentage of societies in Groups 1 and 2 reporting rental or ownership of an office is negligible; however, in Group 6—the largest membership group—almost all of those replying stated that offices were rented or owned. Many of these headquarters buildings are designed to house other health associations such as cancer, heart or TB, medical assistants or insurance groups.

INSURANCE

Insurance for medical society members is made available either through the county or state organization. The survey tabulation shows that most county societies are adequately covered by state-sponsored insurance programs or do not favor establishing such programs for themselves. In listing the types of insurance sponsored or made available, the three which rank highest are Accident and Health Disability, Hospitalization, and Professional Liability. The tabulation also shows that only a few county societies supply professional witnesses, or medical experts, in court cases for members or complainants.

In presenting the report, Dr. George F. Lull states: "We hope that you will find this information of practical value in expanding your county society's activities in the future. Further information on this survey is available from the Council on Medical Service."

ANNUAL SESSION
MONTGOMERY
APRIL 17, 18, 19

FUND RAISING INFORMATION FOR NATIONAL HEALTH AGENCIES

The following information, released by the National Information Bureau, Inc., shows the latest campaign figures for national health agencies.

Organization	Campaign dates	Campaign income only in fiscal year 1957	1957 Campaign goal national and local	Usual division per cent
National Foundation for Infantile Paralysis	Jan.	\$44,034,000	\$46,900,000	Information refused
American Heart Association	Feb.	20,563,900	20,000,000 Estimate	25 Nat'l 75 Local
National Society for Crippled Children and Adults	Mar. 6-April 6	10,293,900	No Goal	8.3 Nat'l 91.7 Local
American Cancer Society	April	29,500,000 Estimate	30,000,000	40 Nat'l 60 Local
National Association for Mental Health	April 27-May 31	3,500,000 Estimate	No Goal	20 Nat'l 80 Local
United Cerebral Palsy Association	May	8,359,300	11,000,000	25 Nat'l 75 Local & State
National Multiple Sclerosis Society	May 11-June 15	2,500,000 Estimate	3,000,000	40 Nat'l 60 Local
Muscular Dystrophy Association of America	Nov.	3,767,800	No Goal	75 Nat'l 25 Local
Arthritis and Rheumatism Foundation	Nov.	2,449,400	5,000,000	36 Nat'l 64 Local
National Tuberculosis Association	Nov. 14-Dec. 31	26,310,400	No Goal	6 Nat'l 94 Local & State

Facial Pain Most Agonizing—The reasons for facial pain being “perhaps the most agonizing of all afflictions” has been given by a Georgia doctor.

There is a reasonable physical reason for severe suffering from facial pain. The “cephalic end of man has been blessed with the highest degree” of nervous development, which allows for the most acute awareness of any sensory stimulation.

Also the head and face command more attention than other parts of the body, Dr. George W. Smith, Augusta, Ga., said in the Feb. 22 Journal of the American Medical Association.

Man is very much aware of his face and head and its vulnerability to injury or hurt. Accordingly, he is quickly and greatly concerned about any painful sensation.

Awareness of others scrutinizing his exposed face magnifies any sensation he might be experiencing, although there may be no objective change to the observer, Dr. Smith said.

The way people bear pain depends on their own personalities, emotions, and neurotic tendencies, he said. This difference among people makes evaluation, diagnosis, and treatment of facial pain a complicated and difficult problem for the doctor.

The precise diagnosis and localization of the origin of facial pain is difficult because there are so many nerves and they so overlap that it is hard to distinguish just what path the pain is following.

Relief depends on the cause. If it results from some-

thing other than nerve damage, such as infection in the mouth or a tumor, it can be relieved by eradicating the cause. When the nerves themselves are damaged or diseased, the treatment is more complicated, often involving surgery.

Doctors Heading West for AMA Annual Meeting in June—Between 12,000 and 15,000 physicians will journey westward in June in search of something far more valuable than gold. They'll be on a quest for the latest information on new medical techniques and discoveries at the American Medical Association's 107th Annual Meeting in San Francisco. The five days of June 23-27 will be filled with bright nuggets—including scientific exhibits, lectures, motion pictures, panel discussions, televised surgical procedures and commercial exhibits. Convenient center for the Scientific and Technical Exhibits, films, color TV and lectures will be the Civic Auditorium, the adjacent new Plaza Exhibit Hall and other surrounding buildings. Headquarters for the House of Delegates sessions will be the Sheraton-Palace Hotel.

Plans for an outstanding scientific lecture program are being completed by the Council on Scientific Assembly. Opening the general scientific program Monday afternoon, June 23, will be a symposium on the care of the severely injured patient. Tuesday morning's general meeting will feature another symposium on hazards associated with therapeutic agents. Formal scientific section meetings will run from Tuesday afternoon through Friday morning.



MEDICAL COLLEGE NEWS



Construction has begun on the health sciences research building shown above. The building was made possible by the passage of Amendment No. 4 in the statewide election held Dec. 17, and an award of \$1,033,000 of Federal monies. The Federal grant carried the provision that the funds were available only if matched with a similar amount from local sources. The matching local funds were made possible through Amendment No. 4.

The proposed research building attests to the phenomenal growth of research within the Medical Center. In 1948 the annual value of gifts and grants for research and training to the Medical Center was approximately \$30,000. As of today, this amount has increased to approximately \$1,000,000 a year.

Obviously such an expansion has magnified the space problems of the Medical Center. The availability of the research building will permit the expansion of present programs and the initiation of many others. Even more important, it will

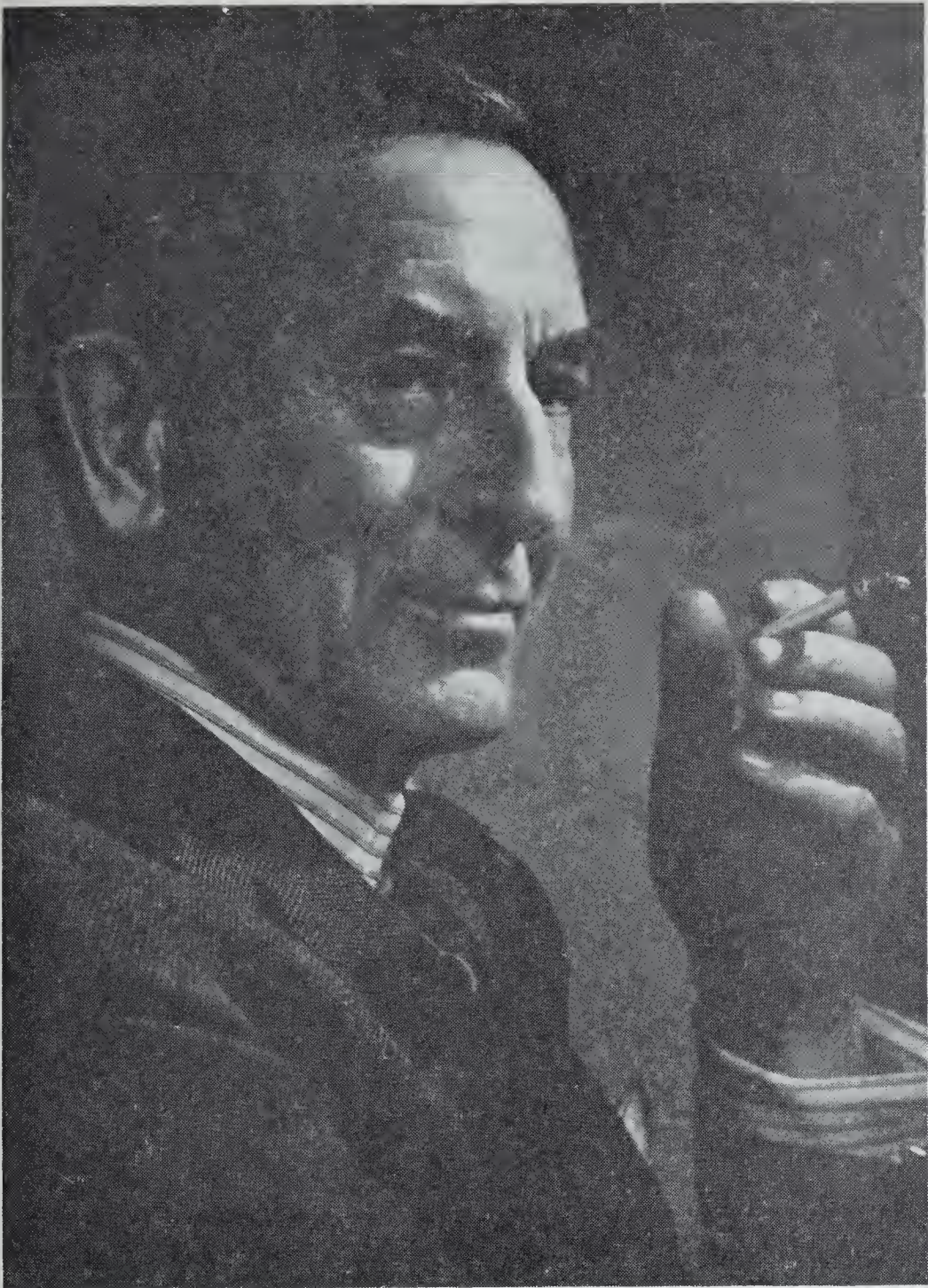
stimulate the recruiting of outstanding health scientists to the Center's growing team of experts.

The location of the building will be unique in that it will span 7th Avenue on the east side of 19th Street. This will achieve the physical union of all of the major units of the Medical Center.

It is estimated that the building will be ready for occupancy in the fall of 1959.

DR. WILLIAM BOYD VISITING PROFESSOR OF PATHOLOGY

Dr. William Boyd rejoined the Department of Pathology of the University of Alabama Medical Center as Visiting Professor of Pathology for the fourth year. His textbooks, writings and accomplishments in the field make him perhaps the world's best known pathologist. He remained with the Medical Center for the first three months of 1958, lecturing to the medical students on Friday,



Moody, Dr. John Paul, Dr. Hardin Ritchey, Dr. Robert Roach, and Mrs. Joseph Simpson, president of the Alabama Foundation for Hearing and Speech, Inc. Officers elected are: Mr. and Mrs. Bob Bodine, president; Mr. and Mrs. H. H. Lanier, vice president; and Mr. and Mrs. J. W. Musgrove, secretary-treasurer.

STATE LEGISLATORS TOUR MEDICAL CENTER

The Alabama State Legislature's Interim Health Committee toured the University of Alabama Medical Center during December. This group is conducting a long-range study into health needs of the state and will make recommendations to the Legislature on ways and means of meeting health problems. They hope to point out not only to the legislators but also to the people of Alabama some of the crying needs, such as state-wide shortages of nurses and other medical personnel, care of the sick poor, capital expenditures which must be made in state-owned facilities, and measures for control and treatment of such major problems as heart disease, cancer, and tuberculosis.

The group heard orientation talks by Dr. Robert Berson, Vice-President in Charge of Health Affairs; Dr. J. F. Volker, Dean, School of Dentistry, and Director, Research and Graduate Studies for the Medical Center; Mrs. Kathryn Crossland, Director, School of Nursing; and Mr. Matthew F. McNulty, Jr., Administrator, University Hospital and Hillman Clinics. After the talks, they toured the Dental School, University Hospital, and Reynolds Library.

Feb. 28 in the Hillman Auditorium on "Spontaneous Regression of Cancer."

COMMITTEE FORMED FOR APHASOID CHILDREN

A committee for aphasoid children was recently formed under the sponsorship of the Alabama Foundation for Hearing and Speech, Inc., with headquarters in the Hearing and Speech Clinic at the Medical Center. The committee is composed of parents of children, examined at the clinic, who have difficulty in dealing with abstractions, such as language and arithmetic, space relationship, and other perceptual aspects. Such children are often presumed to be mentally retarded, since they have difficulty in learning the type of material usually employed in intelligence testing. These standard tests are not adequate for evaluating the capacity of such children to learn; special teaching, training and therapy are also required, which are quite different in approach from the typical special teaching program. It is the purpose of this committee to assist in the development of a complete facility in Birmingham to provide the proper habilitation for such children.

A professional advisory committee was appointed, consisting of Dr. Walter Batson, Dr. Frank

DR. M. B. QUIGLEY JOINS ANATOMY STAFF

Dr. Mervyn B. Quigley has been appointed Instructor in the Department of Anatomy.

Dr. Quigley received most of his formal education in Scotland before coming to the United States in 1953. He was awarded the License in Dental Surgery in 1948 and the Higher Dental Diploma in 1951, both at the University of Glasgow. In 1955 he received an M. S. degree in pathology and Children's Dentistry at the University of Rochester, where he was a Fulbright Scholar. He then became a Demonstrator in Anatomy at the Tufts University School of Dentistry in 1956.

Dr. Quigley's training in dentistry and pathology has led him into several experimental studies on the reactions of the dental pulp following its exposure in hamsters. He intends to continue in dental research and will assist in the dental teaching program.

REYNOLDS LIBRARY DEDICATED FEBRUARY 2

A distinguished array of state and national speakers took part in the dedication of the Law-

rence Reynolds Library at the Medical Center, Feb. 2.

Dr. Reynolds himself, one of the nation's top radiologists, made the presentation of his collection of rare medical books and other historical items which is valued in excess of one-half million dollars.

Other prominent personalities participating in the ceremonies were: Dr. Merrill C. Sosman, Emeritus Professor of Radiology, Harvard Medical School; Dr. Frank A. Rose, Jr., President of the University of Alabama; Dr. Robert C. Berson, Vice-President of the University of Alabama and Dean of the Alabama Medical College; Mr. Hill Ferguson, Chairman of the Board of Trustees of the University of Alabama and one of the state's top citizens; Dr. Tinsley R. Harrison, Professor of Medicine at the Medical College; Dr. Henry M. Edmonds of Birmingham; and Rev. Charles B. Liddell of Ozark, Ala.

The dedication ceremonies took place at 3:00 p.m. in Birmingham's Southside Baptist Church in order to accommodate the large number of persons who attended. A reception and tour of the new library followed.

Dr. Sosman gave the principal address. The in-

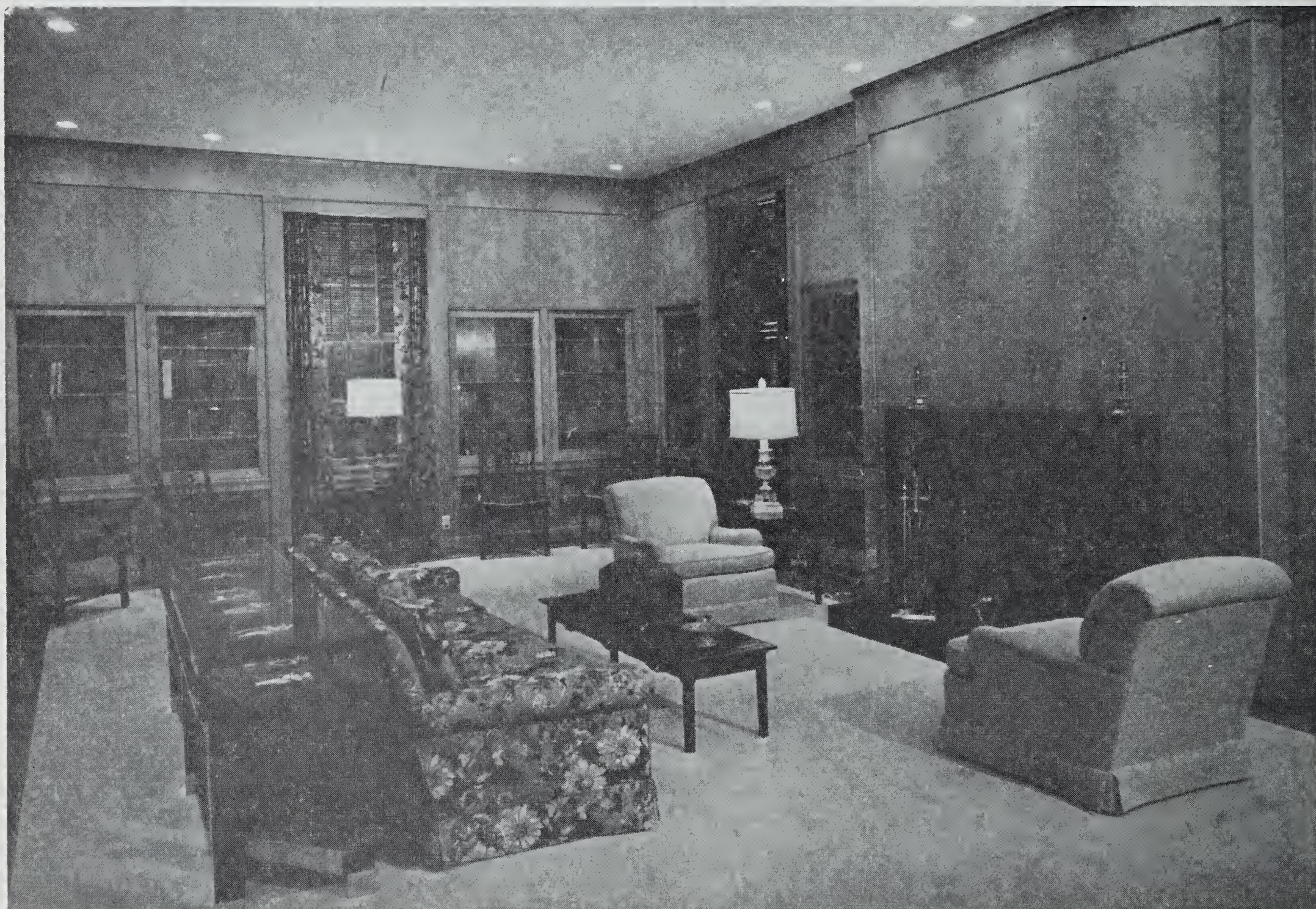
ternationally known radiologist, who was the subject of a Saturday Evening Post article in 1955, is a long-time friend of Dr. Reynolds. His speech included remarks about their work together down through the years.

The dedication and reception served as somewhat of a homecoming for Dr. Reynolds, since a long and distinguished career has kept him away from his native state for over three decades except for occasional visits.

The collection which he gave to the Medical Center is the result of his lifetime interest and enthusiasm for medical research and study. It consists of over 4,500 volumes in all sizes and languages including many rare and first editions and some of the most outstanding collections ever printed.

Manuscripts, original letters, paintings and sculptured art are also part of the historical collection.

The Reynolds Library is expected to attract scholars and medical leaders from all parts of the South in addition to serving the needs of the Alabama Medical and Dental Colleges and the medical profession of the state.



INTERIOR, MAIN READING ROOM, REYNOLDS LIBRARY

DR. LAWRENCE REYNOLDS

Dr. Lawrence Reynolds was born in Skipperville (near Ozark), Alabama. He attended Ozark High School and the University of Alabama where he received his B. A. in 1912. In 1916, he received his M. D. from Johns Hopkins Medical School.

He is licensed to practice medicine in Alabama and Michigan. In 1934 he was certified by the American Board of Radiology.

From 1949 to the present, Dr. Reynolds has been Consultant in Radiology at both the Veterans Hospital, Dearborn, and the Children's Hospital of Detroit, Michigan.

Dr. Reynolds is a member of the American Roentgen Ray Society, where he served as president, Radiological Society of North America, American Board of Radiology, American College of Radiology, American Medical Association, American College of Physicians, Michigan State Medical Society, Wayne County Medical Society, Detroit Academy of Medicine (past president), Detroit Medical Club (past president), and Detroit Roentgen Ray and Radium Society (past president).

From 1930 to the present he has been editor of the American Journal of Roentgenology, Radium Therapy and Nuclear Medicine.

Dr. Reynolds has honorary degrees of Doctor of Laws from the University of Alabama and Wayne State University.

He is an honorary member of German Roentgen Ray Society, Radiological Society of Italy, and Radiological Society of Colombia, South America.

Dr. Reynolds is a member of Sigma Alpha Epsilon, Alpha Omega Alpha, Sigma Psi, Corinthians, F&AM, and Knight Templar Commandery No. 1 Detroit.

His associations include American Association for the Advancement of Science; American Men of Science; Yale Medical Library Associates (Honorary Trustee); Committee of Management, Clements Library, University of Michigan; Board of Governors, Friends of Clements Library; Detroit Public Library Commission (past president); Wayne County Medical Society, Medical Library Commission (chairman); Grolier Club, New York City; Harvey Cushing Society; and National Research Council, Division Medical Sciences (past member).

CONTEST WINNERS

"Necrobiosis Lipoidica Diabeticorum: A Biochemical, Histologic, and Electrophoretic Study" by Doctor Marvin F. Engel, Department of Dermatology, and Doctor William J. Hammack, Department of Medicine, was awarded second place in the annual essay contest of the American Derma-

tological Association. The authors were awarded a \$400 cash prize, and the paper will be published in the Archives of Dermatology.

The American Dermatological Association essay contest is open to all physicians and scientists working in fields related to dermatology. Papers dealing with some phases of dermatology are submitted under a pseudonym and are judged by the Essay Committee of the American Dermatological Association. Five prizes are awarded each year.

PAPERS PRESENTED

Dr. Champ Lyons, Professor and Chairman of the Department of Surgery, participated in the Peter Brent Brigham-West Roxbury Surgical Seminars at the Peter Brent Brigham Hospital in Boston, Jan. 15.

The topic of his discussion was "Experiences with Surgical Treatment of Carotid and Vertebral Arterial Occlusion."

The meeting was held for students, surgical residents, surgeons of the Harvard Hospitals, and other interested physicians and surgeons.

Dr. Lyons also participated in surgical rounds on Wednesday afternoon.

Dr. Lyons also attended a sectional meeting of the American College of Surgeons at Jackson, Miss., Jan. 17. He participated in a symposium on "Management of Multiple Injuries." Dr. Lyons' topic was "Principles of Wound Management." He was also a collaborator for a panel discussion on "Nutrition Therapy and Transfusions in Surgical Patients" at the same meeting.

Dr. John Tingley presented a paper "Studies on the Diurnal Variation and Response to Emotional Stress of the Thyroid Gland," Jan. 24, at the American Federation for Clinical Research Investigation, with Drs. Andrew W. Morris and S. Richard Hill, Jr., as co-authors.

Dr. Sidney Chenault presented the paper "Studies on Adrenal Cortical Suppression by Amphenon in Patients with Secondary Hyperaldosteronism" Jan. 25, at the Southern Society for Clinical Research Investigation, with Drs. Jean H. McNeil, Willard Starnes, Mattie Gautney and Hill, as co-authors. Drs. Howard L. Holley and Alexander Ulloa each presented a paper.

Others attending the New Orleans meeting were Drs. Howard L. Holley, Stanley Griffin, John Tingley, Sidney B. Chenault, James Pittman, James Strachn and Walter B. Frommeyer.

NEW MEMBERS OF COLLEGE OF PHYSICIANS

On Nov. 9, the Board of Regents of the American College of Physicians, upon the recommendation of the Committee of Credentials, elected the fol-

lowing members of the Department of Medicine of the Medical College to Associateship in the American College of Physicians:

Dr. John Francis Burnum, former Chief Resident in Internal Medicine and now Instructor in Clinical Medicine, Medical College of Alabama.

Dr. H. Brooks Cotten, former Chief Resident in Internal Medicine and now Instructor in Clinical Medicine, Medical College of Alabama.

Dr. William Lawrence Hawley, former Associate Chief of Medicine, Birmingham Veterans Administration Hospital and Associate Professor of Clinical Medicine, Medical College of Alabama, and Director, Radioisotope Laboratory, Veterans Administration Hospital, and Chairman, University of Alabama Medical Center Radioisotope Committee.

Dr. William Otis Pardue, Jr., Instructor in Clinical Medicine, Medical College of Alabama.

Dr. Thomas Joseph Reeves, former Chief of Medicine, Birmingham Veterans Administration Hospital, and now Associate Professor of Internal Medicine, Medical College of Alabama on leave of absence for a one-year fellowship in Cardiology in Birmingham, England.

Dr. John F. Wade, Jr., former Chief Resident in

Internal Medicine and now Instructor in Clinical Medicine, Medical College of Alabama.

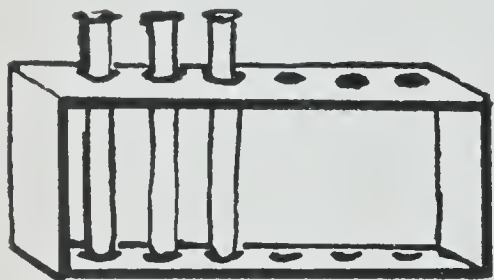
McNULTY RECOGNIZED

Matthew F. McNulty, Jr., administrator, University Hospital, was appointed as a discussion leader by the American College of Hospital Administrators for the national Congress on Administration education program. The program was held at the Congress Hotel in Chicago, Feb. 9-11. Hospital and industrial management leaders from the United States, Canada and Great Britain were presented.

In this capacity, Mr. McNulty directed and guided two of the seminars on administration and management that comprise an important facet of the program of the College's 25th anniversary First Congress on Administration.

Jan. 21-24, Mr. McNulty participated in the 11th Southern Institute for Hospital Administrators at the University of Mississippi Medical Center. He delivered an address entitled "Personnel Management."

At the 37th Annual Alabama Hospital Association Convention in Tuscaloosa, Jan. 30-31, Mr. McNulty was moderator of a panel on "Alabama Indigent Care."



STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.

State Health Officer

PROPER CARE, THE REMEDY FOR ACHING FEET

One of America's foremost humorists, Mark Twain, is perhaps best remembered for his classic comment that "Everyone talks about the weather, but nobody does anything about it." The same words might well be applied to a common disorder that appears to be as universal as the weather. Mr. Twain might have said, with equal candor, "Everyone talks about their sore feet, but nobody does anything about them!"

The apparent and prevalent attitude that sore feet are inevitable is perhaps the prime factor in this widespread problem. How many times have you heard yourself, your friends or your acquaintances say "My feet hurt," attempt to obtain temporary relief, and forget about this part of the body until the aches and pains return once more in a day or so. The familiar refrain is a common-

place, undoubtedly, for it has been estimated that about 90 per cent of America's population suffer from aching feet. Still another estimate places at least 60 per cent of men and 80 per cent of the nation's women among the number who experience some pain in the vital pair of "body supporters."

Moreover, the total of foot sufferers shows no signs of diminishing. If anything, the number may be growing even larger. According to a writer in *Today's Health*, published by the American Medical Association, children have their foot problems too. In this article, the reader's attention is called to an examination of 448 school children. More than one-half of them had foot problems! It is true that 190 of these children had "perfect" feet at the time of the examination. However, even 70 of this number were found to be wearing ill-fitting shoes that promised to make foot sufferers of them in future years.

Still other studies indicate not only the extent of foot problems but the origin of them as well.

By school-starting time, or by the age of six, an estimated 40 per cent of the nation's children already have developed foot ailments. And by the time pupils reach high school age the per cent of those with foot complaints has risen to 75 per cent!

From babyhood throughout life, then, the feet will have important jobs to do. Moreover, they are specially and sturdily designed for their work. If they are properly cared for, they will not hurt, barring abnormalities and disease in other parts of the body which may affect them. The "body supporters" will function well despite the fact that they are almost constantly in use, if they are not abused in the process.

Alabama's health officials find the "inevitable" attitude toward foot ailments, as well as the apparent lack of knowledge of how to care for the feet, as causes for concern. A greater understanding of the foot's construction and function and the major points of care can undoubtedly pave the way to preventing many cases of foot ache, and obtaining competent treatment for those that already exist.

In many respects, the foot is no different from other parts of the body. The foot, like the hand, has bones, blood vessels, nerves, muscles, ligaments and skin. One writer has called the foot the link between the person and the earth.

The foot contains no less than 26 connecting bones. These bones range in length from three-eighths of an inch to about two and one-half inches. The smallest bones, of course, are found in the toes, while the two and one-half inch one is the heel bone.

The body depends upon the feet for two important functions. The first is support for the weight of the body. The other is propelling the body for various actions. Support is needed for standing as well as sitting. The feet act as propellers for walking, running, jumping and climbing.

To support and propel the body as needed, the foot is arched. The arches serve as springs or shock absorbers. The longest arch runs the length of the foot, and it sags when all the body's weight rests on it. You may have noticed that a newborn baby's feet appear flat, and remain so during the first year of life, at least. It is only as the child begins to crawl and stand that fatty pads of skin are absorbed and the arches begin to develop. In fact, the general structure is developing over a period of about 10 years, while certain details of the foot are not perfected until after the individual's twentieth birthday.

Just as the body needs the feet for support, just so the foot—if it is to continue in proper working order—needs support and protection. An essential factor in foot health is proper body posture.

The feet can do their work more efficiently when the weight of the body is evenly distributed. In fact, poor posture accounts for many aches not only in the feet but in other body areas—the back and the shoulders—as well.

Traditionally, man has realized the need for foot wearing apparel, for shoes. Certainly, the first shoes were makeshift affairs, serving as protective covering and little else. The recognition of the foot's need of support came much later.

Unfortunately, shoes have not always been capable of protecting and supporting the feet properly. In fact, even today, far from preventing foot ailments, improperly chosen shoes continue to cause many cases of sore, aching feet. For many reasons—perhaps for vanity's sake, for lack of knowledge of what is required—the improper shoe is frequently chosen. But whatever the reason, the result is the same. The problem that starts out with warning aches may wind up as an actual deformity of the foot.

While shoes should protect and support the feet, they should not prevent the feet from growing. We pointed out earlier that the feet take a long time in developing, with some of the finer details not completed until after the age of 20. Thus, much of the responsibility for foot health rests with parents.

A writer in one issue of *Canada's Health & Welfare* points out that "A baby is not going to complain very much if his soft little feet are being cramped into knitted booties which have shrunk and become too small. Even when he is older and can talk, he will not be able to tell just when his shoes are pressing his pliable little feet out of shape . . ." Thus, the baby's first shoe should be soft and pliable, also.

The proper fit in footwear is important, especially for young people. For, as a writer in a *Today's Health* article, has expressed it, "If the shoe does not fit the foot, then the foot will grow to fit the shoe . . ." In the time before the child's eighth year, then, when his feet are literally growing in "spurts," shoes should be checked for size frequently. During normal growth, shoe size changes for two-to-six-year-old children every four to eight weeks. In the next age group, six to ten years, a change in size occurs every eight to twelve weeks. The time between size changes is progressively longer as a person ages, so that the 15-year-old and adults may need a new shoe size only every six months to 20 years.

One recommended procedure for fitting very young children's shoes consists of drawing the foot pattern on a piece of paper. The child first should be fitted with stockings or socks which are just tight enough to draw the toes together lightly.

Then, as the child stands on paper, the outlines of his feet can be traced with a pencil. The outlines of both feet should be drawn, as one foot is frequently larger or shaped differently from the other. The foot outline pattern can be cut out, taken to the shoe store and shoes can first be tried on the cutout.

Use of the foot pattern, however, is not a substitute for trying on shoes. Things to watch for while trying on footwear are soles with solid support for all the toes and a snugly fitting heel that does not slip at the back or sag at the side. The great or big toe should not reach too near the end of the shoe; neither should the sides or the tops of the shoe press too heavily on any of the toes.

Parents who need and wish to do so may economize by handing down various items of clothing from older to younger children. But where shoes are concerned such a practice may well turn out to be false economy. No two children have exactly the same size and shape of feet, so the shoes that are too little for an older boy are not usually a good fit for the younger brother in the same family, either. Thus, although it may seem a waste to discard a pair of shoes, the alternative of handing them down may mean expensive foot treatment problems for the younger child in the future.

Design is another major factor in shoes. One of the *Today's Health* writers we mentioned earlier tells of the tightly laced or buttoned high top shoes which were popular in earlier years. The reasoning for this particular design was support and a source of strength for the ankles. But to show the fallacy in this thinking, the writer compares this restricting type of shoe to placing a healthy arm in a splint to protect it from exercise! Many other examples of what another writer has called "all-wrong" shoes can be found, such as the sandals raised high off the ground by stilts, worn by the ancient Chinese.

However, the shopper today who knows what to look for can find well-designed shoes. Such designs will allow the feet and ankle muscles freedom to grow and develop.

The weather, the need for warmth and ventilation, circulation and the person's activities are other points to be considered in shoe selection. Some parents have objected to sandals for their children, in the belief that the open, loose-fitting style allows the child's foot to spread more than is necessary or desirable. However, some studies have shown that the feet usually grow most during the spring and summer months. Moreover, they appear to grow in length as well as in width. Actually, the well-designed sandal of suitable material aids foot hygiene in warm weather because it allows perspiration to evaporate quickly.

Special footwear is available for those persons who have occupations or who indulge in sports requiring them. Such footwear include ski boots, those for riding, golf and tennis shoes. Many other workers require comfortable shoes for an excessive amount of walking or standing. Even the busy housewife, who walks about seven miles every day just within the house, according to that Canadian publication we mentioned earlier, finds that a medium or low-heeled shoe is the most desirable type for her. Especially is this true if she has tried to do a day's work while wearing bedroom slippers or high heels; these types are not designed for a lot of walking and standing.

Foot hygiene, also, is important, especially to prevent such infections as athlete's foot. The feet should be washed every day, thoroughly dried, and the use of powder is recommended. Oil preparations, as well, may be used to soften dry skin. The simple precaution of cutting toe nails straight across will usually serve to prevent ingrowing nails.

There are many effects of wearing ill-fitting, poorly designed shoes and other foot abuses. Corns and calluses are some of them. Bunions, various foot infections and fallen arches, cramps in the leg muscles, and even backaches and poor digestion are others. Moreover, none of these foot ailments are bettered by the home treatment they frequently get. In fact, more not less trouble usually results from what one writer has called home "bathroom surgery."

Understanding what feet are for, wearing properly designed shoes that fit, and receiving competent medical treatment for foot ailments can result in better foot health. When people give their feet more care than abuse, complaints of aches and pains will abate accordingly.

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director

SPECIMENS EXAMINED

JANUARY 1958

Examinations for diphtheria bacilli and Vincent's	88
Agglutination tests.....	596
Typhoid cultures (blood, feces and urine).....	605
Brucella cultures.....	6
Examinations for malaria	29
Examinations for intestinal parasites.....	2,742
Darkfield examinations.....	5
Serologic tests for syphilis (blood and spinal fluid)	25,121
Examinations for gonococci.....	1,586
Examinations for tubercle bacilli.....	3,928
Examinations for Negri bodies (smears and animal inoculations).....	205
Water examinations.....	1,829
Milk and dairy products examinations.....	4,199
Miscellaneous examinations.....	569
Total	41,508

BUREAU OF PREVENTABLE DISEASES

W. H. Y. SMITH, M. D., Director

CURRENT MORBIDITY STATISTICS

1958

	Dec.	Jan.	E. E.* Jan.
Typhoid and paratyphoid.....	3	1	3
Undulant fever.....	0	0	2
Meningitis.....	22	12	12
Scarlet fever.....	431	461	75
Whooping cough.....	23	7	55
Diphtheria.....	3	5	20
Tetanus.....	4	0	2
Tuberculosis.....	121	115	178
Tularemia.....	1	1	5
Amebic dysentery.....	1	1	1
Malaria.....	1	0	1
Influenza.....	4373	2125	771
Smallpox.....	0	0	0
Measles.....	60	154	213
Poliomyelitis.....	6	0	6
Encephalitis.....	2	0	1
Chickenpox.....	131	174	295
Typhus fever.....	0	0	2
Mumps.....	134	174	141
Cancer.....	440	550	364
Pellagra.....	0	0	0
Pneumonia.....	262	262	256
Syphilis.....	104	98	212
Chancroid.....	5	4	6
Gonorrhea.....	254	323	377
Rabies—Human cases.....	0	0	0
Positive animal heads.....	13	11	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

Automation Contributing to Obesity Problem—Automation may have its advantages but it is causing a major problem in the field of medicine.

More and more people are tending to become overweight as a result of our new sedentary life which provides more leisure time with less heavy physical work, according to Dr. Robert H. Barnes, of Seattle.

Writing in the Feb. 22 Journal of the American Medical Association, the University of Washington School of Medicine doctor said, "Reduction and permanent weight control require healthy changes in living habits."

In addition to physical examinations and general health evaluation, a physician today must also concern himself with the patient's personal living habits if he is to recommend an effective reducing program.

"Usual eating habits and average daily physical activity are two of the most important points to be explored," said Dr. Barnes. He added, "There is no single approach to the treatment of obesity, only lifetime control."

A special weight history should be the first step in determining a program to bring long-term results. This history will give an index of past and present weight, maximum weight, and estimated ideal weight.

The second step is to modify the way of eating, which must be designed to be followed during the patient's lifetime. This approach is more satisfactory on the long-range basis than the conventional rigid diet, Dr. Barnes said.

Lowering the caloric intake is necessary for anyone to reduce. Despite the fact that dieting alone has been a failure, it is still the principal support in reducing, he said.

In setting up a diet, the patient's working facilities, meal hours, family food patterns, and income level must all be considered.

Additional steps in the program should include the use of medication (dispensed under a physician's supervision), exercise, and posture control.

He noted, "Moderate exercise, month in and month out, can be the difference between following a starvation regimen and being able to follow a more normal diet according to one's appetite."

Ways Suggested to Combat Staphylococcic Infections

—Two suggestions for combating the growing problem of staphylococcic infections in hospitals have resulted from a recent American Medical Association conference.

Reported in the March 8 Journal of the A.M.A. the suggestions are:

—That every hospital appoint a responsible officer or committee to investigate infection in hospitals and attempt to control it by instituting preventive procedures.

—That more scientific research concerning staphylococci be encouraged. "Diligent research" is needed to understand the special properties that make the bacteria so dangerous and to find control measures against them.

The conference on staphylococcic infections, sponsored by the A.M.A. Board of Trustees, was attended by representatives of major medical groups. The A.M.A. board passed the conference recommendations on to the Joint Commission on Accreditation of Hospitals for its consideration and action. Seven reports of the conference appear in the current Journal.

Two general contributing causes of this serious situation can be discerned, one Journal report said. They are:

"A tendency to relax the rigorous aseptic precautions in hospital 'housekeeping' and procedure, relying overmuch on antibiotics to suppress infections."

"The very peculiar biologic characteristics of the epidemic strain or strains, including their special propensity for becoming resistant to an increasingly wide range of antibiotics and chemotherapeutic agents."

Dr. Stuart Mudd, Philadelphia, chairman of the A.M.A. committee on research, said complications due to staphylococcic infections are "currently bedeviling" hospital staffs in all medically advanced parts of the world.

Appearing throughout the world is "a strain or strains" of *Micrococcus* (*Staphylococcus*) *pyogenes* var. *aureus* with "very special biologic characteristics." These strains cause skin abscesses, wound infections, pneumonia, and other complications in hospitalized persons.

An accompanying Journal editorial warned "that aseptic techniques should never be relaxed for a moment in spite of the convenient availability of antibiotics. The modes of transmission of staphylococci are varied and complex and the organisms are practically ubiquitous."

In addition to asepsis in the operating room and nursery, many hospital housekeeping details must be considered, the editorial said. According to one report in the Journal, these range from the ink pad used in the delivery room to record the footprints of infants to hand-washing, "possibly the most important single control measure."

The editorial also said, "Fortunately a few antibiotics are still effective against staphylococci. How long they will remain so will depend on the wisdom and restraint with which they are used."

Already a large proportion of staphylococci are resistant to penicillin, the tetracyclines, and streptomycin, the conference reports showed. While some resistance to erythromycin and chloramphenicol occurs, the majority of staphylococci are still sensitive to bacitracin, carbo-mycin, neomycin and novobycin. However, these drugs must be used with extreme care to prevent bacterial resistance from developing and because of the possibility of harmful side effects from the drugs.

In addition to recommending further research and the institution of hospital committees, the conference noted the need for community participation in these problems. It suggested that county medical societies, local health departments, and interhospital committees on infections take an interest in the problem.

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATISTICS
FOR NOVEMBER 1957, AND COMPARATIVE DATA

Live Births, Deaths, Fetal Deaths, Infant Deaths, and Deaths by Cause	Number Registered During November 1957			Rates* (Annual Basis)		
	Total	White	Non- White	1957	1956	1955
Live births.....	6955	4395	2560	26.8	25.5	27.3
Deaths.....	2535	1591	944	9.8	9.0	8.8
Fetal deaths.....	158	85	73	22.2	21.3	19.8
Infant deaths—						
under one month.....	149	82	67	21.4	20.7	21.3
under one year.....	224	105	119	32.2	35.4	31.1
Causes of Death						
Tuberculosis, 001-019.....	18	10	8	6.9	8.5	6.4
Syphilis, 020-029.....	9	4	5	3.5	2.3	2.8
Dysentery, 045-048.....	2		2	0.8		0.8
Diphtheria, 055.....	1		1	0.4	0.8	2.8
Whooping cough, 056.....					0.8	0.4
Meningococcal infections, 057.....					0.8	
Poliomyelitis, 080, 081.....	1		1	0.4		
Measles, 085.....						
Malignant neoplasms, 140-205.....	285	201	84	109.7	106.6	115.4
Diabetes mellitus, 260.....	31	21	10	11.9	12.0	10.4
Pellagra, 281.....	2	2		0.8	1.2	
Vascular lesions of central nervous system, 330-334.....	362	225	137	139.4	121.6	117.0
Rheumatic fever, 400-402.....	2	1	1	0.8	1.2	0.8
Diseases of the heart, 410-443.....	819	552	267	315.4	281.5	275.2
Hypertension with heart disease, 440-443.....	150	66	84	57.8	51.4	56.7
Diseases of the arteries, 450-456.....	46	31	15	17.7	15.8	16.4
Influenza, 480-483.....	69	46	23	26.6	1.9	2.8
Pneumonia, all forms, 490-493.....	103	53	50	39.7	29.7	31.2
Bronchitis, 500-502.....	6	3	3	2.3	1.2	0.4
Appendicitis, 550-553.....	3	1	2	1.2	0.4	0.8
Intestinal obstruction and hernia, 560, 561, 570.....	5	3	2	1.9	5.0	6.8
Gastro-enteritis and colitis, under 2, 571.0, 764.....	6	1	5	2.3	7.3	2.4
Cirrhosis of liver, 581.....	12	10	2	4.6	4.2	4.0
Diseases of pregnancy and childbirth, 640-689.....	5	3	2	7.0	10.4	9.4
Congenital malformations, 750-759.....	32	23	9	4.6	4.4	4.7
Accidents, total, 800-962.....	165	103	62	63.5	83.8	69.1
Motor vehicle accidents, 810-835, 960.....	69	46	23	26.6	43.6	30.0
All other defined causes.....	422	251	171	162.5	162.9	147.9
Ill-defined and unknown causes, 780-793, 795.....	129	47	82	49.7	37.4	34.4

PROVISIONAL BIRTH AND DEATH STATISTICS
FOR DECEMBER 1957, AND COMPARATIVE DATA

Live Births, Deaths, Fetal Deaths, Infant Deaths, and Deaths by Cause	Number Registered During December 1957			Rates* (Annual Basis)		
	Total	White	Non- White	1957	1956	1955
Live births.....	7283	4455	2828	27.1	27.2	26.6
Deaths.....	2739	1606	1133	10.2	9.4	9.6
Fetal deaths.....	145	71	74	19.5	20.6	23.7
Infant deaths—						
under one month.....	156	78	78	21.4	22.2	25.4
under one year.....	255	113	142	35.0	34.9	40.6
Causes of Death						
Tuberculosis, 001-019.....	25	12	13	9.3	10.5	7.8
Syphilis, 020-029.....	6	1	5	2.2	1.5	1.5
Dysentery, 045-048.....	1		1	0.4	0.4	0.4
Diphtheria, 055.....						2.2
Whooping cough, 056.....	1	1		0.4		1.1
Meningococcal infections, 057.....	2	2		0.7	0.4	0.4
Poliomyelitis, 080, 081.....					0.7	0.4
Measles, 085.....						
Malignant neoplasms, 140-205.....	296	197	99	110.3	116.2	114.0
Diabetes mellitus, 260.....	35	23	12	13.0	12.0	13.4
Pellagra, 281.....	2	2		0.7	0.4	0.7
Vascular lesions of central nervous system, 330-334.....	385	224	161	143.5	126.7	125.1
Rheumatic fever, 400-402.....	6	2	4	2.2	3.0	0.7
Diseases of the heart, 410-443.....	901	577	324	335.8	303.4	304.8
Hypertension with heart disease, 440-443.....	153	70	83	57.0	51.9	63.1
Diseases of the arteries, 450-456.....	64	36	28	23.8	16.8	18.6
Influenza, 480-483.....	48	25	23	17.9	6.0	9.6
Pneumonia, all forms, 490-493.....	98	43	55	36.5	38.5	39.4
Bronchitis, 500-502.....	7	3	4	2.6	1.9	2.2
Appendicitis, 550-553.....	5	1	4	1.9	1.5	0.7
Intestinal obstruction and hernia, 560, 561, 570.....	13	6	7	4.8	3.4	2.6
Gastro-enteritis and colitis, under 2, 571.0, 764.....	7	4	3	2.6	4.9	7.0
Cirrhosis of liver, 581.....	25	17	8	9.3	8.2	5.2
Diseases of pregnancy and childbirth, 640-689.....	4	1	3	5.4	5.4	10.9
Congenital malformations, 750-759.....	30	19	11	4.1	5.4	4.5
Accidents, total, 800-962.....	199	137	62	74.2	65.0	68.7
Motor vehicle accidents, 810-835, 960.....	87	64	23	32.4	26.9	33.4
All other defined causes.....	438	230	208	163.2	160.1	171.1
Ill-defined and unknown causes, 780-793, 795.....	141	43	98	52.5	44.1	43.1

*Rates: Birth and death—per 1,000 population; Infant deaths—per 1,000 live births; Fetal deaths—per 1,000 deliveries; Maternal deaths—per 10,000 deliveries; Deaths from specified causes—per 100,000 population.

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NEWER PROBLEMS IN THE PREVENTION OF CORONARY DISEASE

M. E. GROOVER, COLONEL, USAF (MC)

Washington, D. C.

The search for a method of preventing coronary artery disease may be divided into several important areas.

The first was the recognition of the syndrome by Heberden¹ in 1772 and Jenner in 1778,² who showed the relationship of coronary artery disease to the symptoms of angina pectoris.

The second was the astute observation of Sir William Osler who took notice of the relationship of coronary disease to ambition and prosperity.³ John Hunter made the statement that his life was in the hands of any rascal who chose to provoke his anger.

The third was the discovery in 1910 of lipid material in atheromatous lesions, and later the work of Page who demonstrated, in 1941, the relationship between atheromatosis and abnormal lipid metabolism.⁴

Perhaps the fifth milestone would be the work of Yater and his group, who showed that this disease is not one of age primarily. They reported autopsy findings on 450 young men dying of coronary disease during World War II.⁵

The recognition of dietary fats as a cause of elevated serum lipids in some individuals and the prevalence of coronary artery disease in these

individuals are probably another important element.⁶

Certainly one important step in the development of the present day concept of coronary disease is the role of hyaluronidase in increasing intimal permeability to lipids and the protective effect of cortisone in decreasing this permeability.^{7, 8, 9}

The recognition of the relationship of infection to the development of clinical symptoms of coronary disease was pointed out by Klotz as early as 1910.^{10, 11, 12}

Gofman¹³ pointed out in 1950 the relationship between lipoprotein molecules and atherosclerosis. His work started a tremendous reactivation of interest in the field of lipid metabolism and atheromatous lesions of the coronary arteries.

The demonstration of marked fluctuation in all lipid elements in relation to emotional stress, as worked out in clinical cases in the Air Force, is also an important step to be considered¹⁴ in the

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light of the recent work of Dr. Seifter which revealed a lipid mobilizing factor.

This audience is well aware of the first of these milestones and they require no further discussion.

However, the demonstration of transient hyperlipidemia resulting from emotional stress and chronic lipidemia from prolonged emotional stress has been less well publicized. This is a difficult phenomenon to demonstrate, but definite evidence of this type of reaction has been shown in our group of Air Force officers in the Washington area. These individuals have been observed for nearly six years, with blood lipid studies done at varying intervals. The fluctuation noted in their serum lipids was at first thought to be the result of laboratory errors and for the first two years specimens were sent to three laboratories. When it became apparent that all three were showing the same fluctuations, we were sure that the changes were caused by dietary violations and, in order to show this, longitudinal charts were prepared on those individuals showing the greatest fluctuations.

The individuals were anxious to cooperate and excellent rapport was established between them and the physicians. Those individuals with elevated serum lipids were placed on fat-free diets and blood studies done at regular intervals. The results were plotted on graph paper as shown in figure 1.

indiscretion could not cause these marked fluctuations, we asked certain individuals to let us know when they experienced unusual emotional stress, in order that we might do serum lipid studies at the time.

Figure 3 shows the number of reactions to stress that were studied, showing the type of somatic reaction in relationship to serum lipid change. *Forty-three patients were discovered to have somatic reactions without evidence of hypercholesterolemia. Twenty-one patients did show transient hypercholesterolemia associated with stress phenomena. A total of sixty-four patients volunteered the information that they were subjected to an unusual amount of emotional stress.* This probably does not represent the true number of persons showing changes in blood lipids while under emotional stress any more than it represents the total number of reactions to stress in the group. It only represents the number of patients who recognized the fact that they were under an unusual amount of emotional stress and volunteered the information. It so happens that blood specimens were taken in only twenty-one of these sixty-four individuals at the opportune moment when transient hypercholesterolemia could be demonstrated.

In order to observe the reaction to stress in a group of this type, several factors must be present:

1. The physician must be in very good rapport

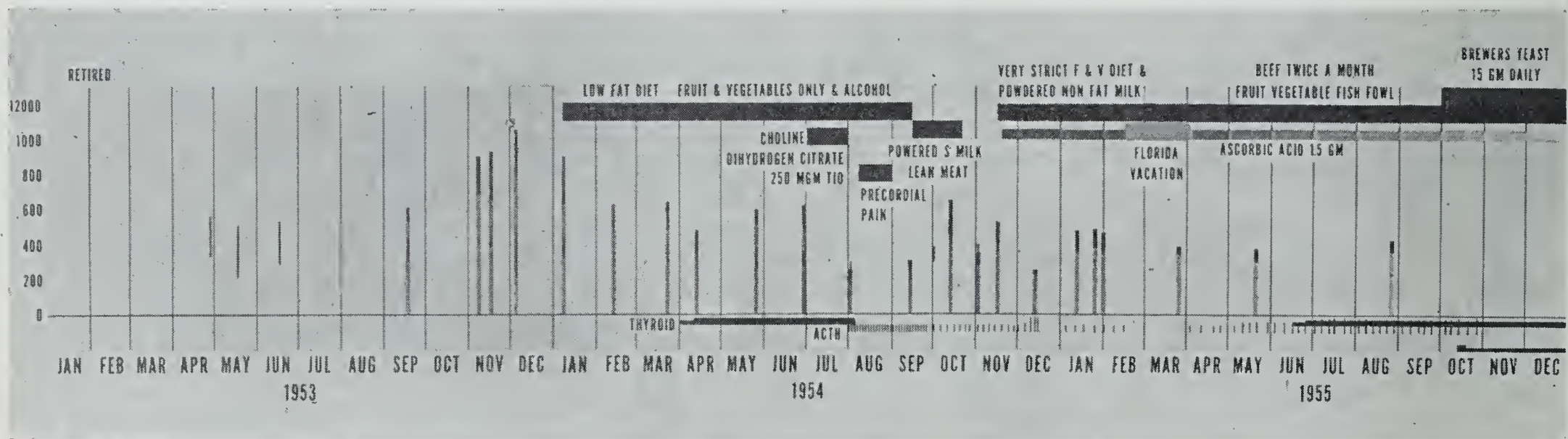


Fig. 1. Graph of General Niergarth.

Several officers, after seeing their serum lipid values visualized in this manner, began to suggest that the periods of high serum lipids were during periods of rather severe emotional stress of one kind or another. We refused to believe this phenomenon at first, and started doing fat tolerance tests on those with the greatest fluctuations.

Figure 2 shows the percentage variation above and below the average for all laboratory readings during the years of observation. On the right side is the same information for the data obtained during a fat tolerance test.

After satisfying ourselves that one single dietary

with the patient.

2. The patient must be subjected to a stressful situation which is *spontaneous*, as simple fatigue does not seem to produce this type of reaction. It would be difficult to construct an artificial situation comparable to the spontaneous ones observed in this group.

3. The physician must be available at the time, and he must have laboratory facilities for taking and examining the specimens.

4. The stressful situation must be one which the patient feels free to discuss with his physician. It is quite conceivable that many individuals have

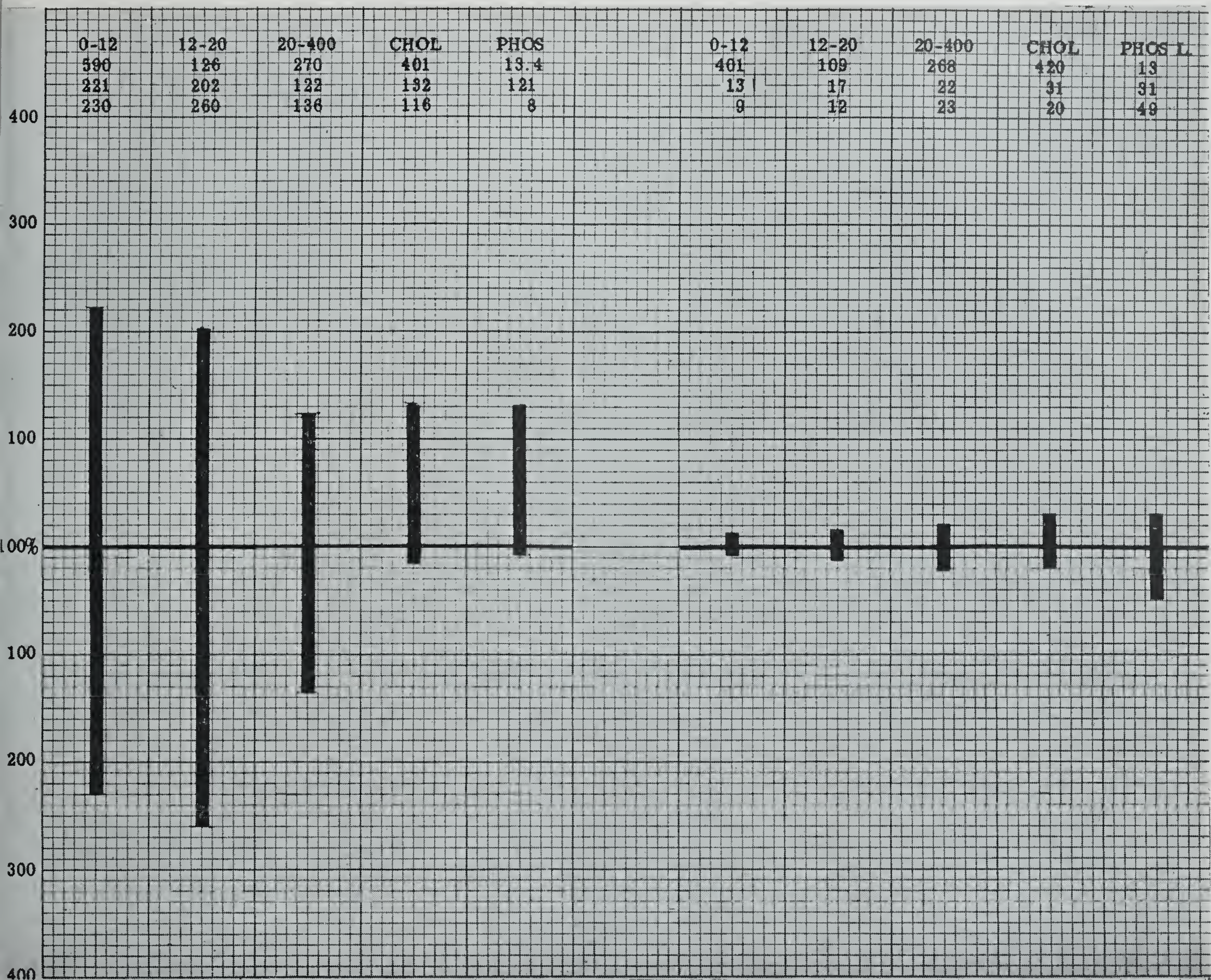


Fig. 2. Graph of fat tolerance test.

REACTION TO EMOTIONAL STRESS IN RELATION
TO JOB OR DOMESTIC LIFE

	WITH NO TRANSIENT HYPER CHOLESTEROL EMIA	WITH HYPER CHOLESTEROL- EMIA
EPIGASTRIC DISTRESS	11	2
PRECORDIAL PAIN	8	8
FATIGUE WITH CEPHALIN FLOC. THYMOL	8	1
ARTHRALGIA	5	0
HYPERTENSION	5	1
DERMATITIS	4	3
SPASTIC COLON ABDOMINAL PAIN	2	0
NONE DETECTED	0	6

Fig. 3. Tabulation of stress reactions.

faced situations which they do not wish to discuss, even with their physician, and this may account for one or two cases showing marked fluctuation with no relation to stress or treatment program.

5. The laboratory determinations, the stressful situation and other pertinent data should be recorded in a manner to make the phenomena intellectually visible.

A study of this type of reaction to emotional stress must be done on the spot, since it cannot be produced artificially. The only way additional data can be obtained is by observing a group of individuals carefully enough to recognize the situation when it occurs.

Figure 4 is a composite drawing showing the response of eight different individuals to emotional stress. In each case the stressful situation was different. This drawing is presented to show the magnitude of the changes in serum cholesterol. It is artificial in that most of these individuals were subjected to more than one stressful period and,

CORONARY DISEASE

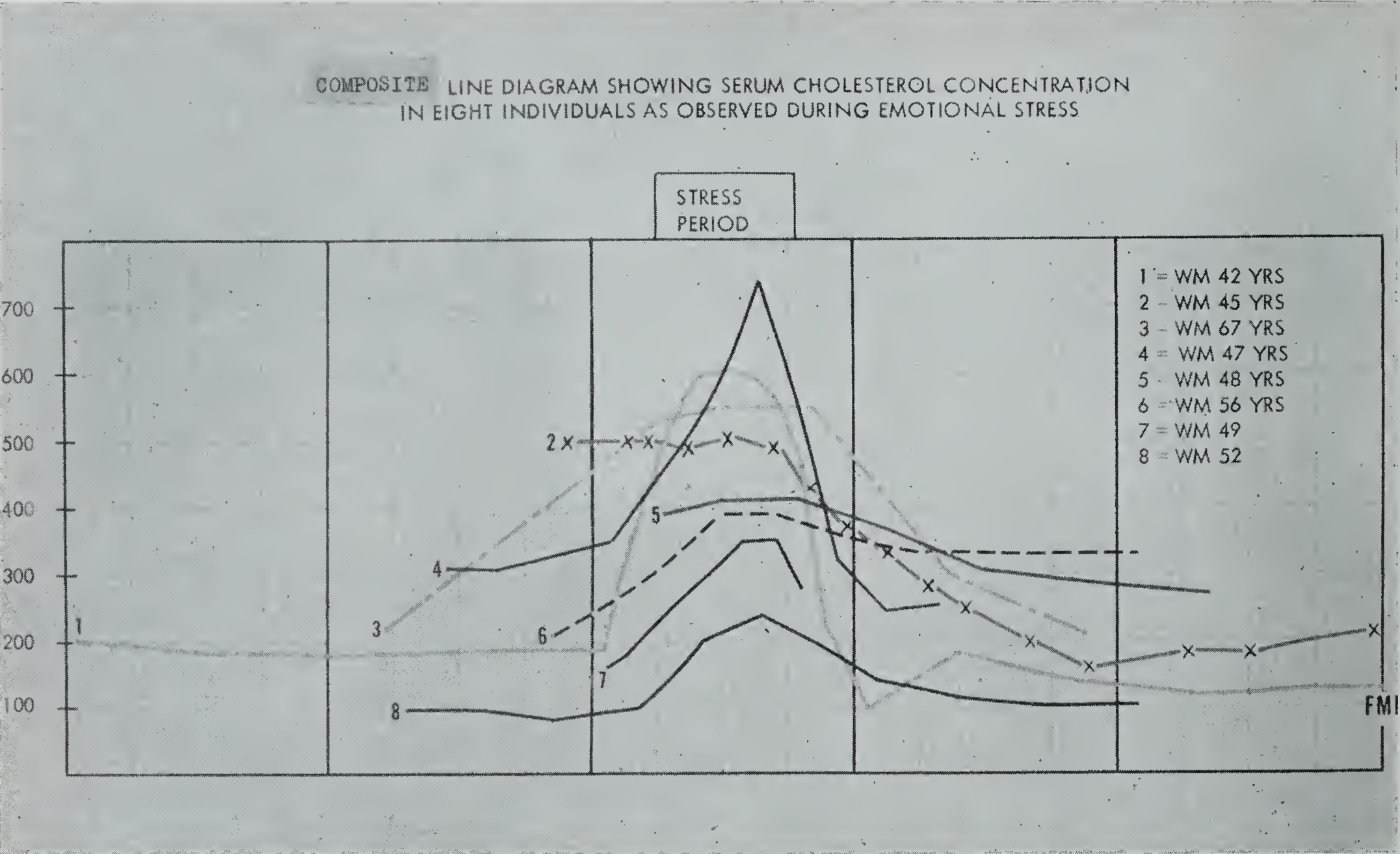


Fig. 4. Composite of eight cases.

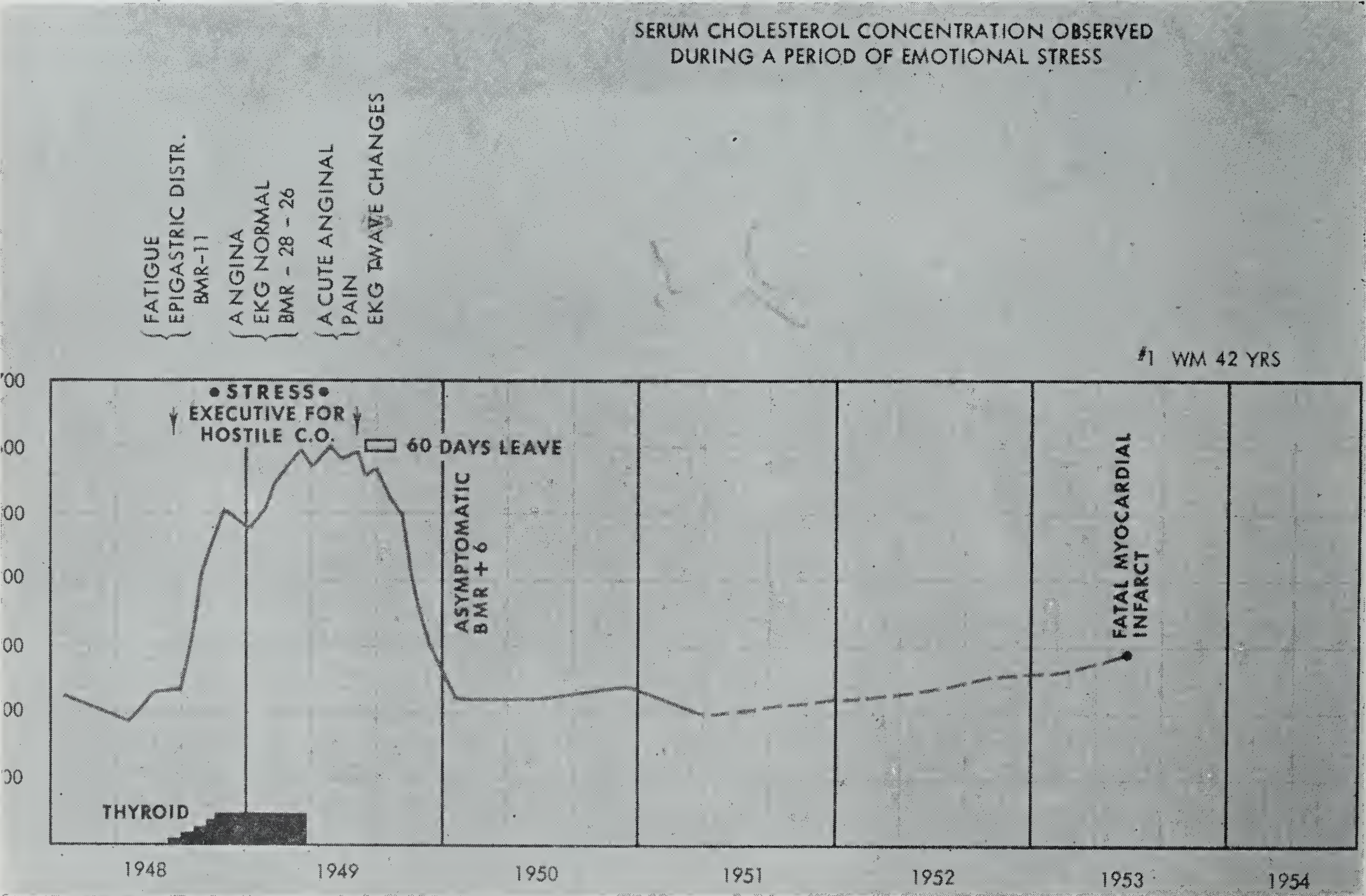


Fig. 5. 42-year-old male executive officer.

therefore, had several peaks during the period of observation. In this drawing the highest peaks were selected to illustrate the varying degree of individual response. Attempts to document the character and degree of stress in these patients have failed. The character of stressful situation varies from political and official to domestic conflicts that are difficult to calibrate.

The next eight figures show the detailed changes in serum cholesterol and in lipoprotein in response to emotional stress and strain of these eight patients.

Figure 5 is that of a 42-year-old male, the executive officer for his division chief in an overseas station. His boss was developing all the signs and

boss was retired from the service. The patient was apparently well for three and one-half years when he developed a fatal myocardial infarct. The circumstances immediately preceding his fatal episode are unknown; his diet and reaction to stress were not recorded.

Figure 6 is a picture of a 45-year-old male, first seen because of a suspected myocardial infarct. He was thought to be one of those commonly referred to as idiopathic hypercholesterolemia. After his wife left the station his domestic stress was removed. The serum cholesterol remained elevated for approximately six months after this, then gradually returned to normal levels. Approximately two years after his serum cholesterol re-

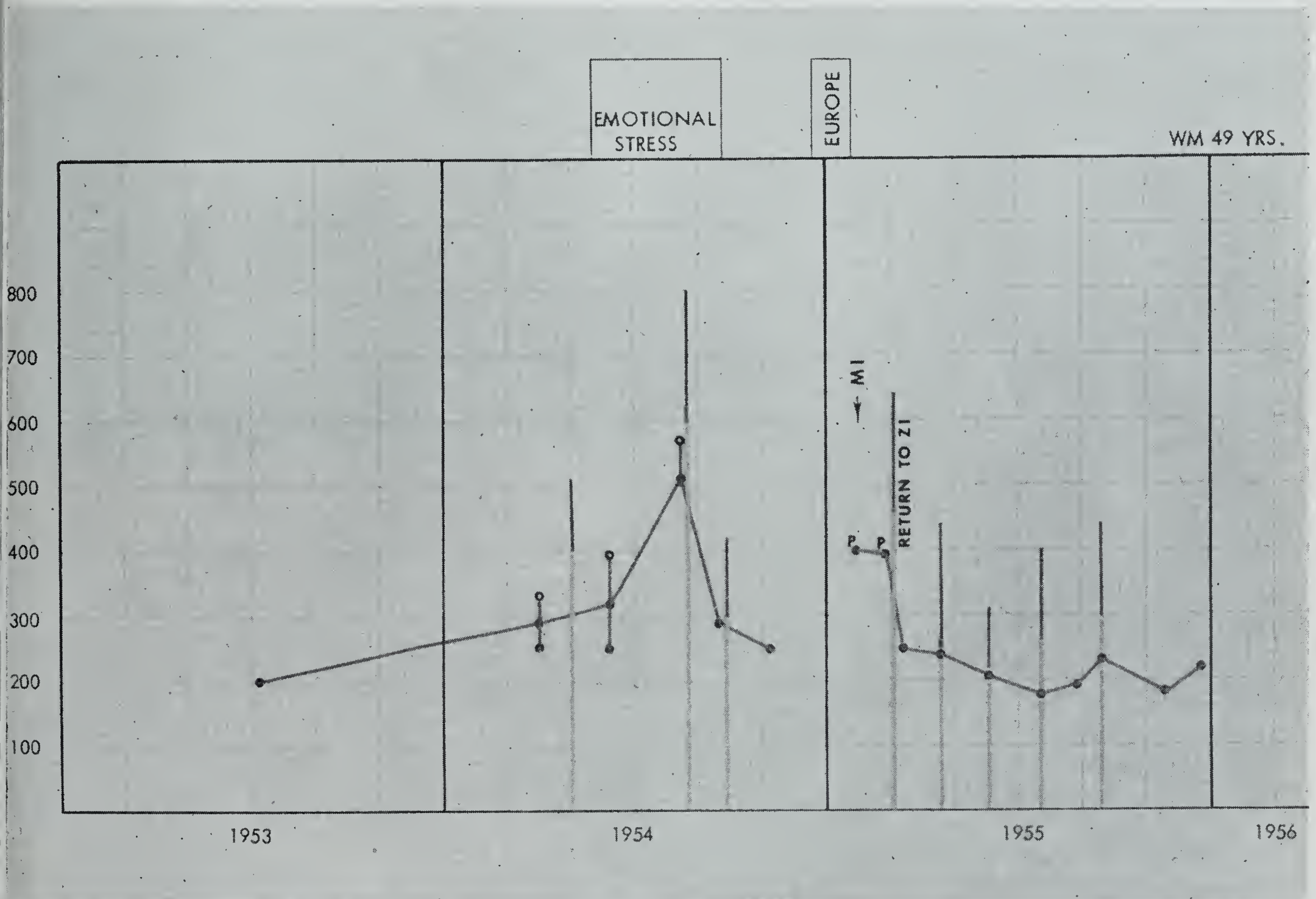


Fig. 6. 45-year-old male with domestic problem.

symptoms of cerebral arteriosclerosis. The stress in this instance was a severe one. The patient, with most of his productive life in the service, was faced with a superior who must make his efficiency report at regular intervals, and at the same time was a person completely unreasonable and actively hostile towards the patient. It so happens that the symptoms subsided soon after a physician sent the patient's boss to the hospital. The graph shows a remarkable drop in serum cholesterol in the five months after the patient's

turned to normal he suffered an acute myocardial infarct from which he apparently made a complete recovery. Eighteen months later he developed a fatal myocardial infarct. This patient was on a rigid low-fat diet during the entire period of observation. The character of his diet during the six months prior to the first infarct is unknown. One wonders whether the removal of stress was responsible for the change in serum cholesterol, or whether it was the prolonged effect of a low-fat diet. There is a question of whether this person

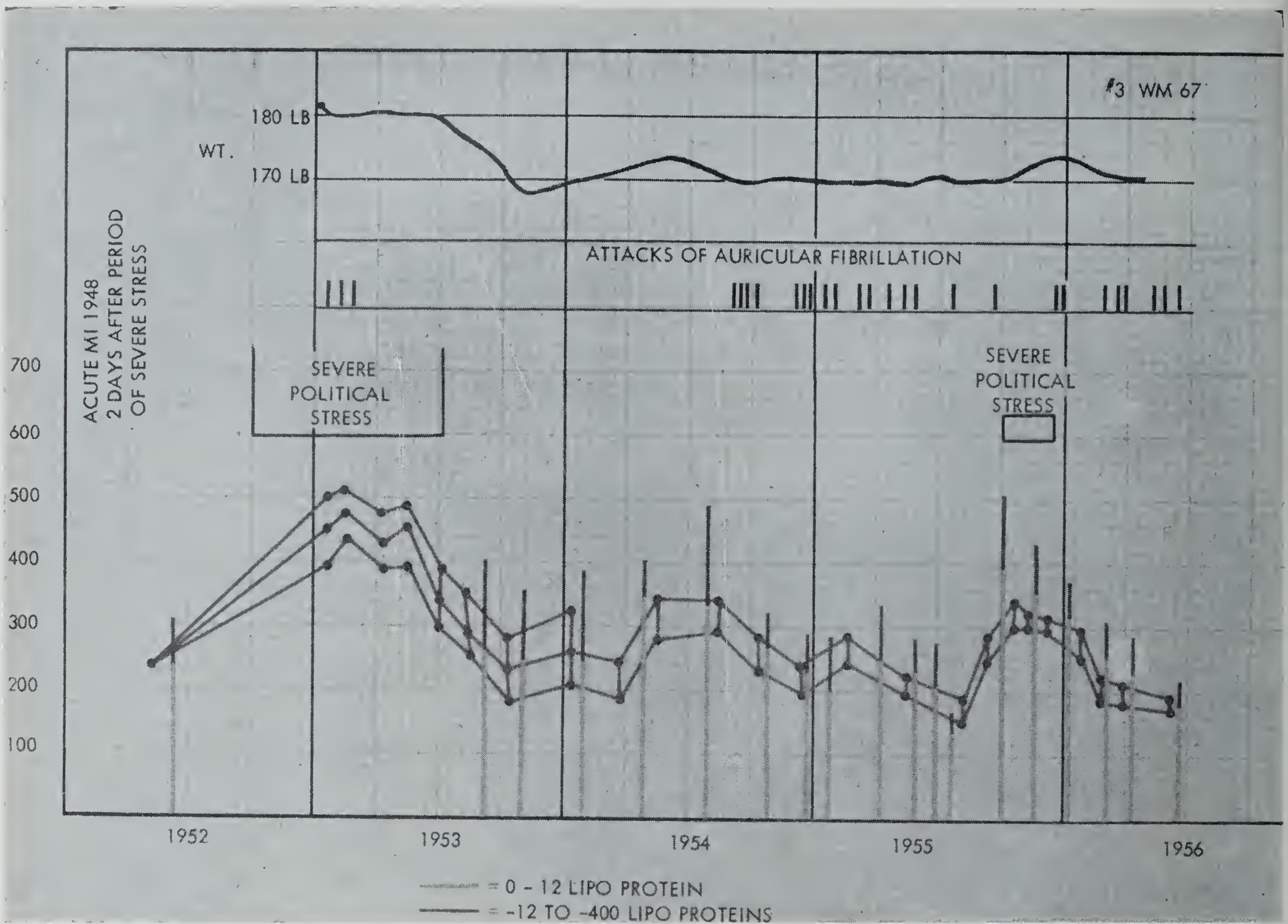


Fig. 7. 67-year-old male with political stress.

was subject to other periods of stress which are not recorded in this diagram.

Figure 7 is one of the longitudinal studies of a 60-year-old male who was subjected to rather severe political stress. His reaction on some occasions was one just short of rage. The severe stress lasted for about two months, and gradually decreased. He had experienced an acute myocardial infarct four years prior to this period, but no evidence of a new infarct could be detected even though he had three attacks of auricular fibrillation during the first period of stress. This patient seemed to have many recurring stressful episodes during the next two years. The second severe period of stress was in 1955, where an increase is demonstrated in cholesterol and in the lipoproteins. He was existing on a relatively low-fat diet during the entire period covered by this graph.

Figure 8 is the longitudinal study of a 47-year-old white male, who was subjected to a peculiar type of emotional stress resulting in a combination of fatigue, resentment and, at times, of acute anger. The cholesterol and lipoprotein fraction seemed to be falling, and he was staying with his diet fairly consistently. He was hospitalized for minor sur-

gery, and approximately two weeks after leaving the hospital developed an acute myocardial infarct. He was retired; and during the process of his retirement many small irritating episodes developed. The highest lipoprotein value, shown at the end of 1955, was taken several hours after a stressful situation which produced an outstanding rage reaction. Along with this, he had precordial pain intermittently for the next two days, which was the first pain he had experienced in three months.

This patient shows an interesting phenomenon. During the last three months of 1955, it seemed that almost daily some small crisis was added to his worries; all of his stressful situations were severe enough to have irritated any normal person. This patient, however, seemed to react more vigorously than a normal man would be expected to react to similar stimuli. The lipoproteins seem to show a greater fluctuation in response to stress in this case than the total serum cholesterol.

Figure 9 shows the gradual increase in cholesterol in a 49-year-old male who was known to have had an acute myocardial infarct in 1950. From that time until 1953 no laboratory reports of cho-

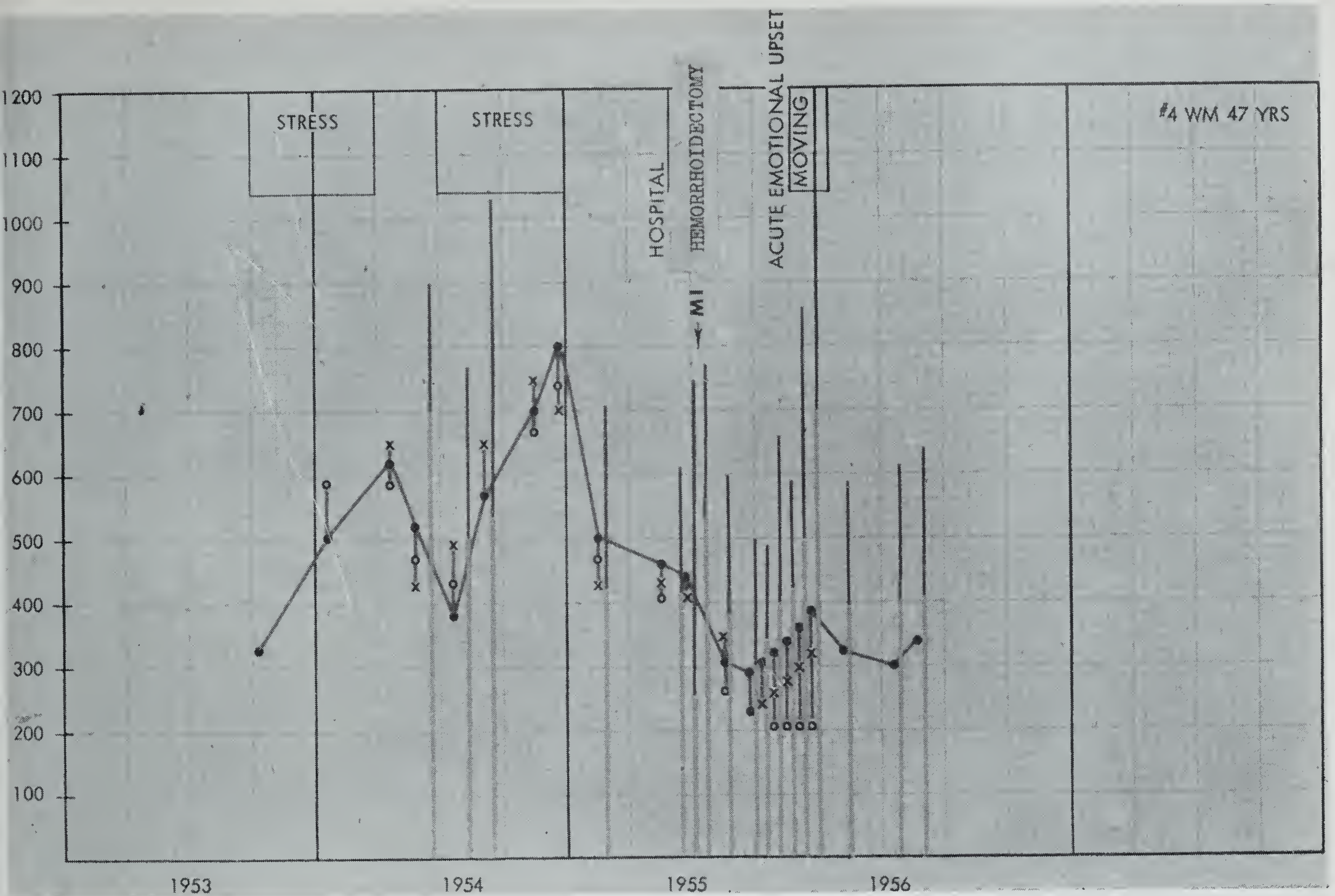


Fig. 8. 47-year-old white male with acute stress.

lesterol determination were available. He was given a job during this period that was considered to be free of emotional strain and stress. He was completely asymptomatic during this period. In 1953 he was transferred to one of the hottest spots in the service. In addition to the stress of his job, a personality clash developed which reached a climax in August of 1954. According to the patient, things improved considerably after this time, and his physician began to feel happy about the situation. At this time he began to have recurrent subcutaneous abscesses which were treated with antibiotics.

His official duties required that he make a trip out of the country, and during this trip he lost a good deal of sleep, violated his diet completely, and became thoroughly exhausted. After approximately one day of rest he developed an acute myocardial infarct. Serum cholesterol determinations were done twice during this period: 390 and 374 milligrams percent. Since returning to the United States he has been free from stress, and has observed a strict fat-free diet.

Figure 10 is the picture of an officer who was transferred from field duties to headquarters in 1952. At the time of his annual physical examination in 1952 his serum cholesterol was consid-

ered to be normal. The duty assignment was one of those jobs requiring the patient to coordinate certain activities with the other two major services. The activities were in a field of vital importance, and one requiring the reconciliation of opposing basic concepts. He was constantly working to meet deadlines, and almost as constantly failing to meet them. On top of the situation, certain personality conflicts developed. The peak of emotional conflicts developed in October and November of 1953, and again in 1954.

This individual was a serious and very conscientious type of person before his transfer to the Washington area; and several months later he became tense, and relaxed with difficulty, and was considered very irritable. A change of duty assignment occurred in early 1955; and the blood chemistry seems to have improved. This patient was on a low-fat diet, with occasional violations, during the last half of 1953 and all of 1954 and 1955. There has been no clinical or laboratory evidence of coronary artery disease in this patient. Here, again, the lipoproteins seem to show the effect of emotional stress to a greater degree than does the serum cholesterol.

Figure 11 is the longitudinal graph of the blood chemistry of a 60-year-old male, each specimen of

CORONARY DISEASE

SERUM CHOLESTEROL OBSERVATIONS DURING PERIOD OF EMOTIONAL STRESS

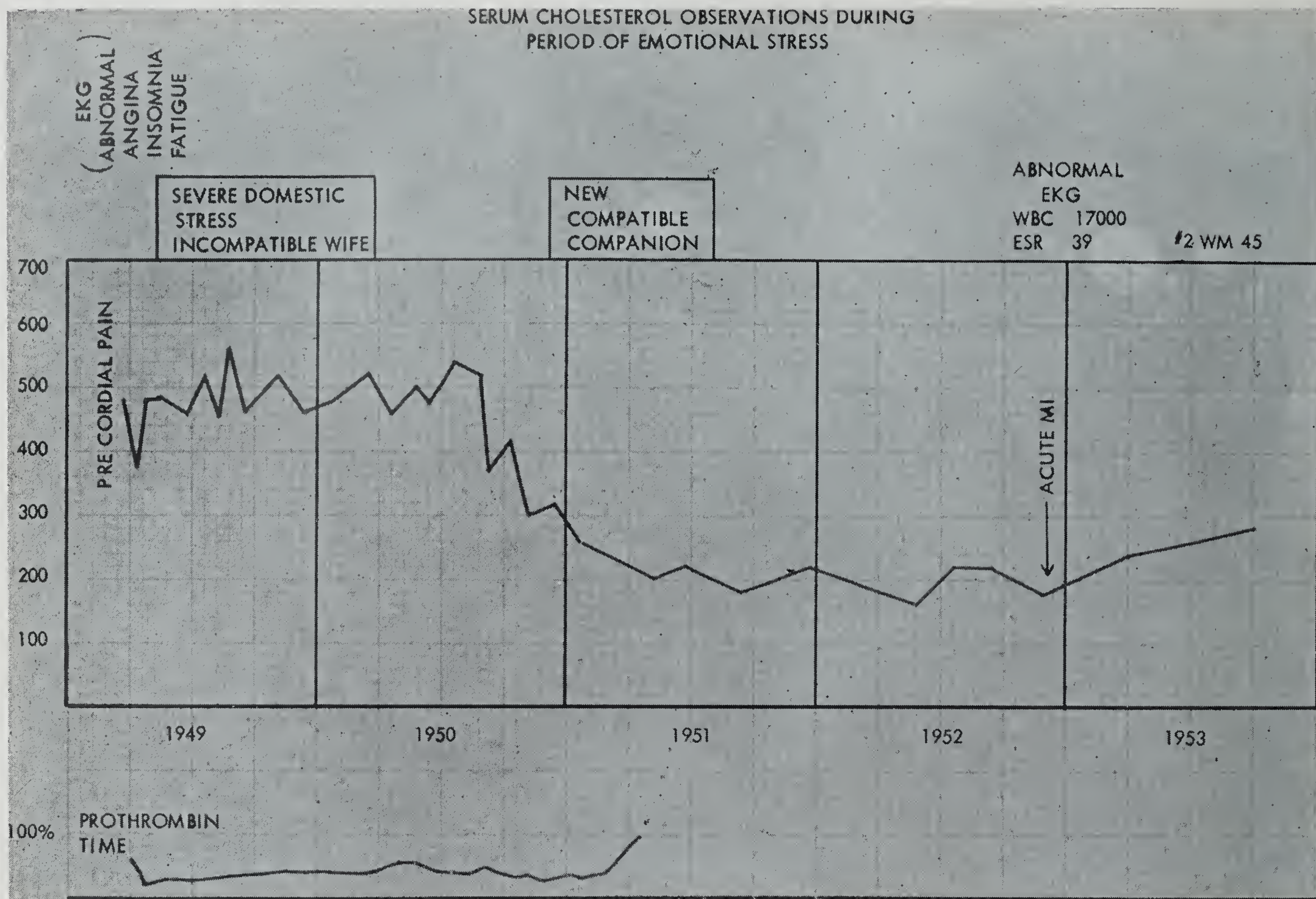


Fig. 9. 49-year-old white male with stress, infection, and dietary indiscretion.

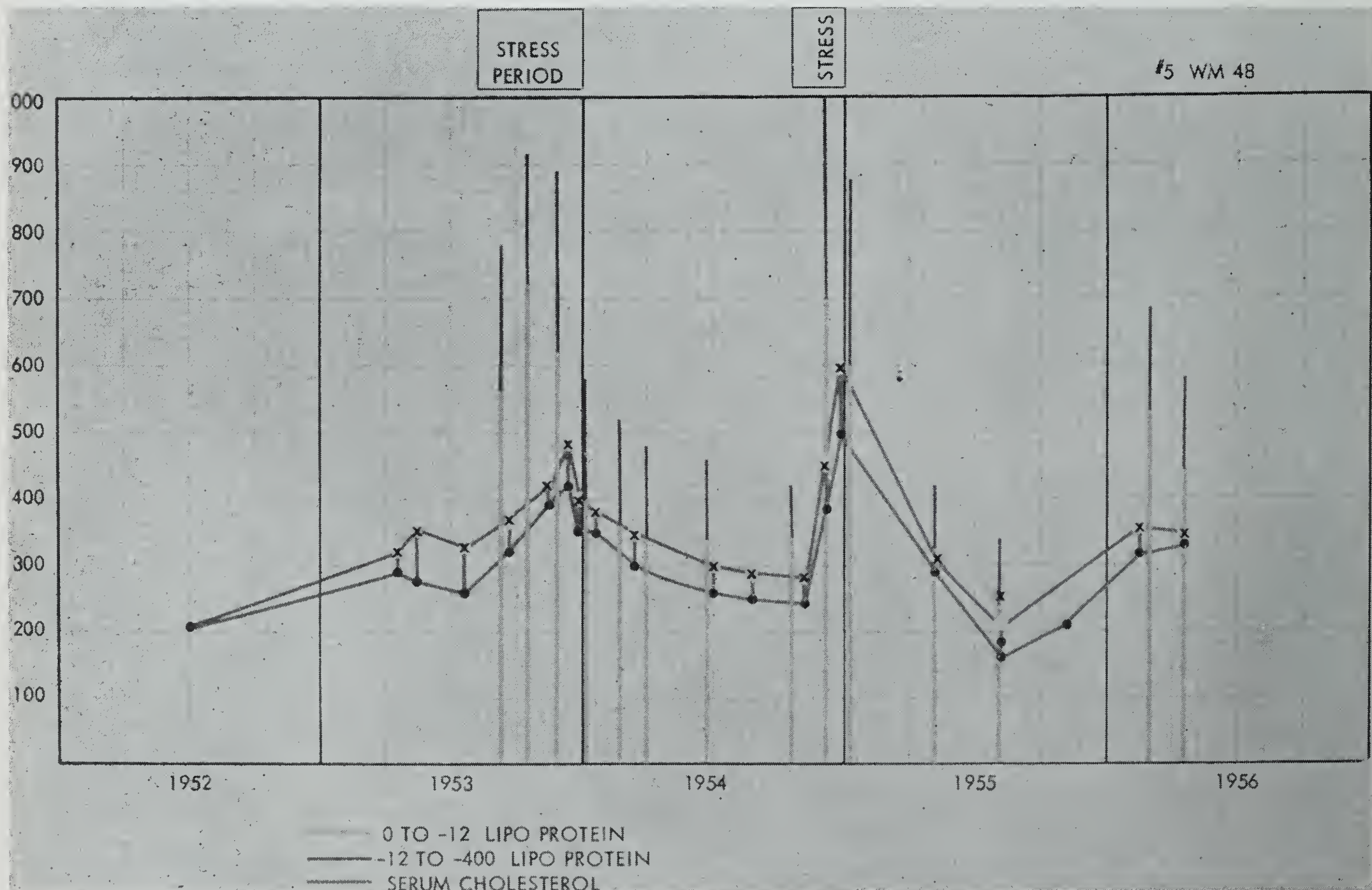
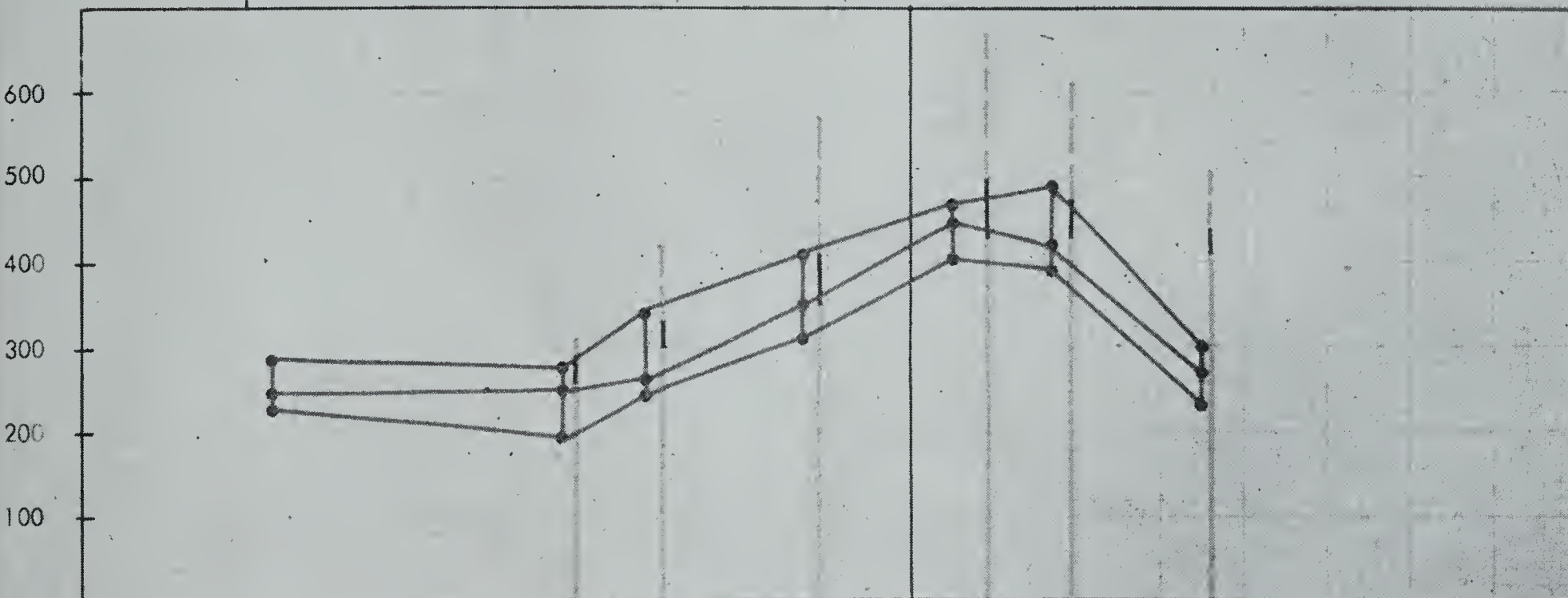
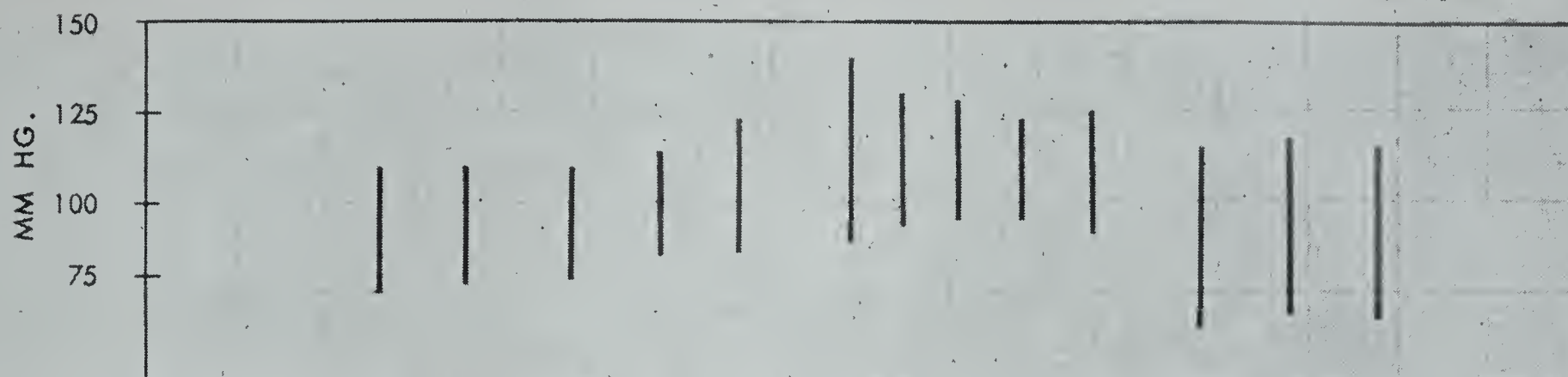


Fig. 10. 48-year-old white male transferred from field to Pentagon duty.

CORONARY DISEASE

NEW JOB INCREASED TENSION

WM 63



CHOLESTEROL, LIPO PROTEINS

0 TO -12

-12 TO -20

-20 TO -400

Fig. 11. 60-year-old white male showing adaptation to new job.

NEW JOB INCREASED RESPONSIBILITY

WM 58

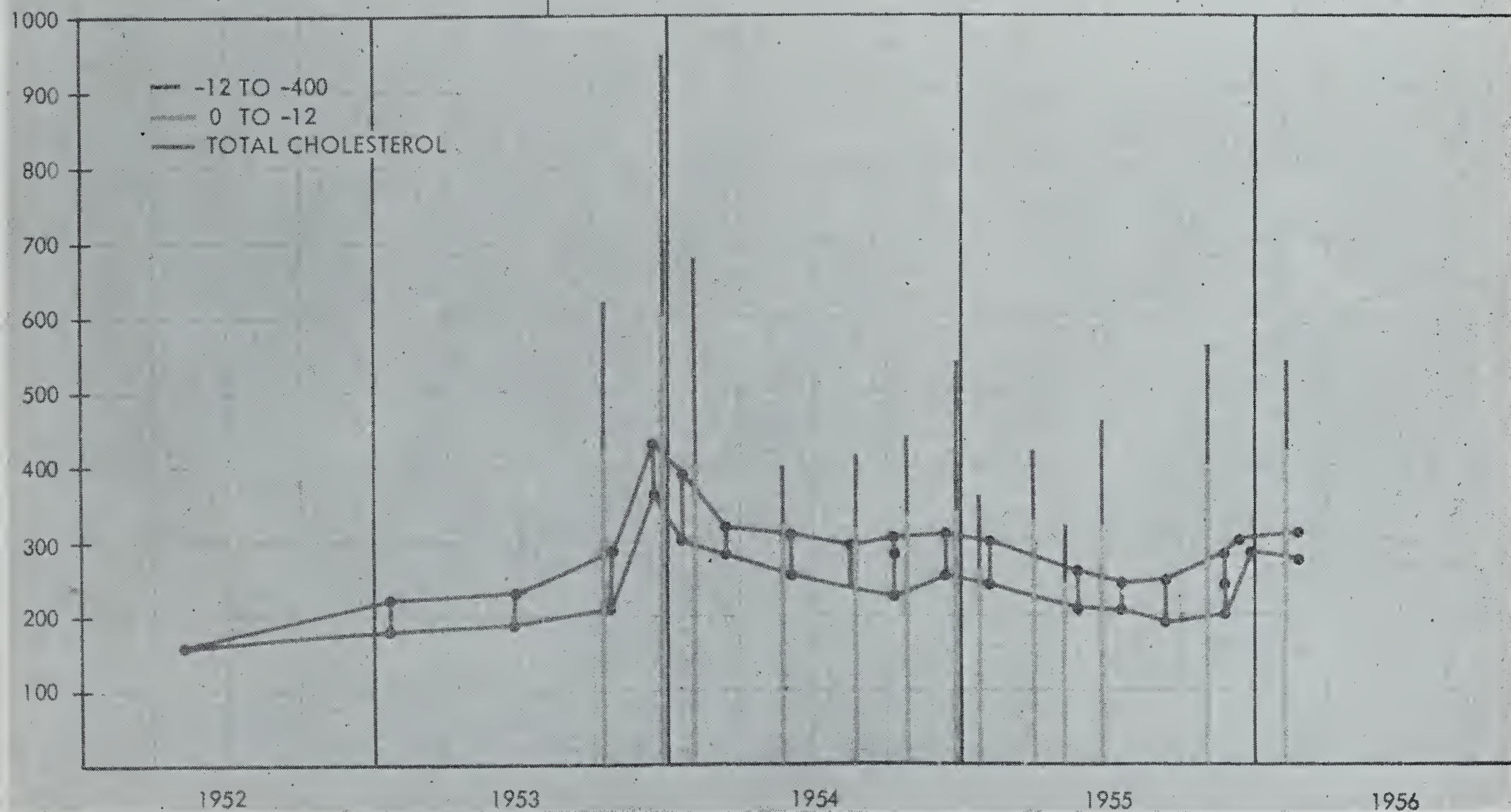


Fig. 12. 58-year-old male, new job with increased responsibility.

blood examined in three different laboratories, and lipoproteins done at the School of Aviation Medicine. There was no evidence in the history of acute emotional stress, except that he had taken over a new job with considerable increase in responsibility and tensions. He worked 10 to 12 hours every day, seven days a week, and gained approximately six pounds. Some of his close associates thought he had become irritable, but this was never apparent to his physician. The patient has had no evidence of coronary artery disease to date. He admits that his dietary fats may have increased slightly and his exercise program suffered greatly. His serum lipids have returned to normal values during the past four months.

Figure 12 is a graphic picture of an officer of 58 who was conscious of no special emotional stress or strain, except the tension associated with a marked increase in responsibility on his new job. Here the greatest change is seen in the lipoprotein pattern of December 1953.

Figure 13 shows the type of fluctuations seen in other patients. This is the graphic picture of a general officer, 49 years of age, who has a history of multiple attacks of diverticulitis and has had a partial colectomy for this reason. His blood cholesterol prior to 1954 had fluctuated from a low

of 235 to a high of 480 milligrams percent. After developing a myocardial infarct in October of 1954, he was placed on a vegetarian type of diet very low in fat. One can see a definite change in his blood cholesterol and in the lipoproteins. But as the time passes one sees rather marked fluctuations in the lipoprotein concentrations which do not seem to be related to any stressful situation or to any specific treatment program. This person considers himself to be tense and easily harassed.

This type of chart may represent the kind of reaction seen in individuals with multiple minor stressful situations which suddenly appear and disappear with equal rapidity. This patient shows a greater fluctuation in his lipoprotein pattern than in serum cholesterol. This would substantiate Gofman's¹³ contention that, if a large group of such patients were studied statistically, many of them would exhibit the elevation in lipoproteins that would not be apparent in serum cholesterol.

Figure 14 shows a general officer of 47 years of age who is one of the patients considered to have idiopathic hypercholesterolemia with xanthoma of the eyelids. His cholesterol has fluctuated from a high of 670 milligrams percent to a low of 380 for several years prior to 1953. He was placed on a strict vegetarian diet and given sitosterol and thy-

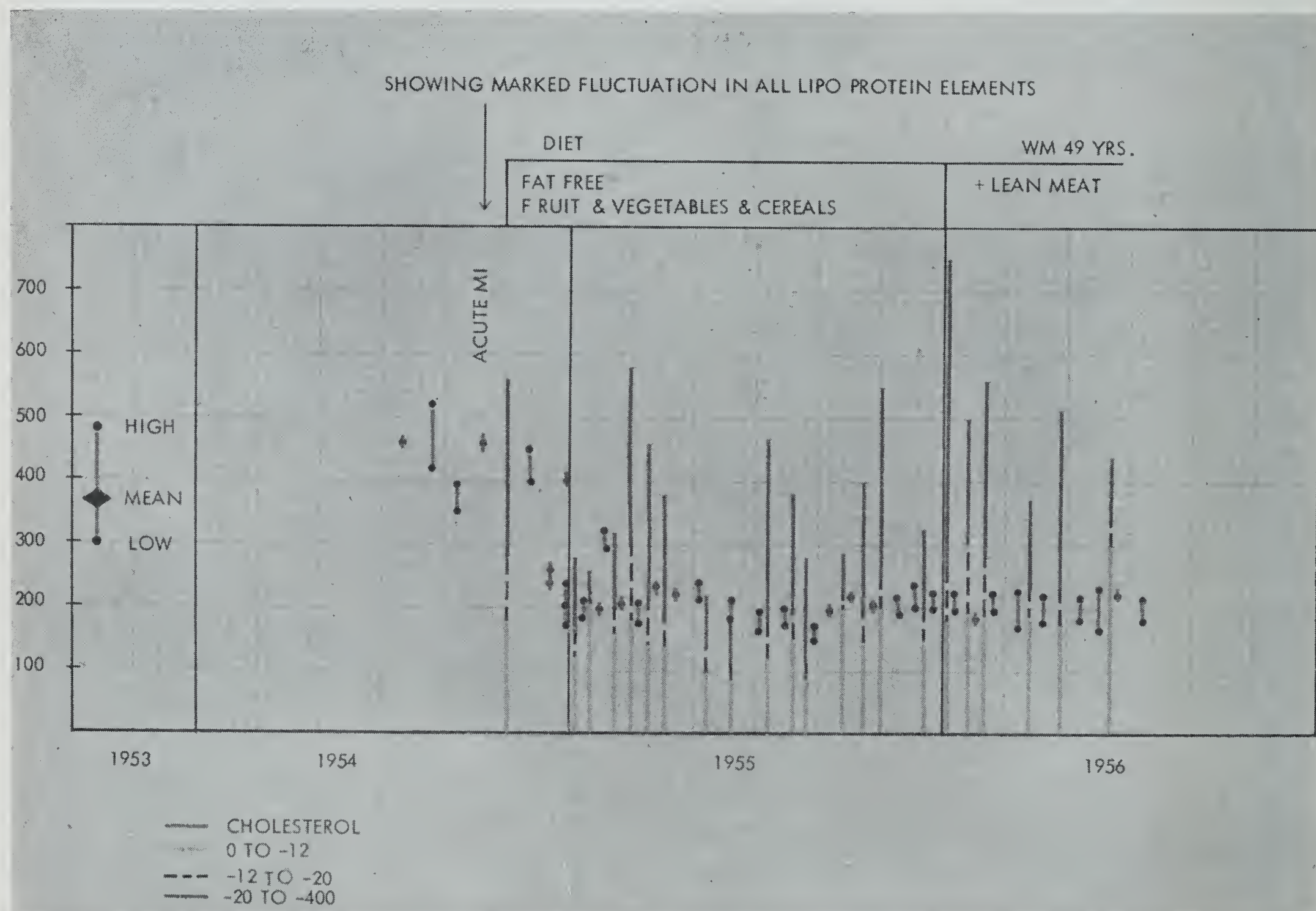


Fig. 13. 49-year-old male with multiple attacks of diverticulitis.

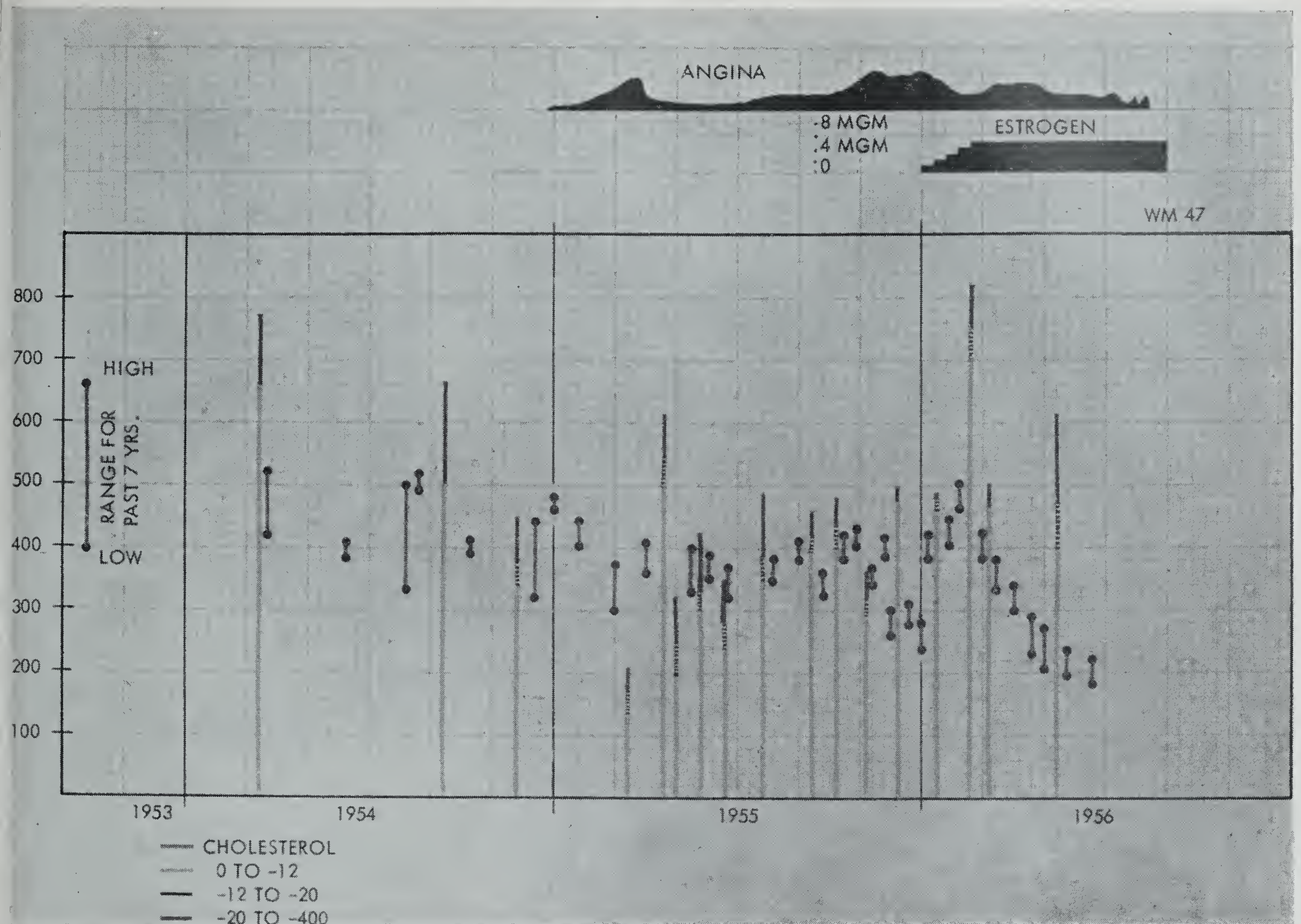


Fig. 14. 49-year-old male with idiopathic hypercholesterolemia.

roid, with no significant improvement until he was started on estrogen therapy, which appears to be of some value. The worth of this cannot be certain, however, until he has had at least a year of observation. Some of these patients seem to show an excellent response to estrogen therapy for the first three or four months. Later the serum lipids return to the previous high values when estrogen dosage is reduced to a tolerated level.

Since all of the individuals who have developed coronary artery disease in this group have shown rather marked fluctuations in their serum cholesterol and lipoprotein values, it was decided to arrange the individuals in the group according to the average of all their serum cholesterol determinations, and to compare this with an arrangement showing the same individuals according to their peak value of serum cholesterol obtained during their period of observation.

Figure 15 shows the individuals arranged according to their average cholesterol value. Simple inspection of this graph shows the wide nonspecific spread of the 14 cases of clinical coronary disease, and the futility of attempting to predict coronary disease in those cases below 300 milligrams per-

cent. One patient who had recovered from his first myocardial infarct produced a beautiful example of the change in the serum lipids that can occur in as short a time as two hours. This was still a mystery to us until we learned of Dr. Joseph Seifter's work at the Wyeth Institute for Medical Research in Radnor, Pennsylvania.

Dr. Seifter had produced a substance in the plasma of a horse by the administration of cortisone which, when injected into a primed rat, would produce a tremendous elevation in the serum lipid of this animal. No one was able to repeat Dr. Seifter's work, and this substance was never accepted by the medical profession until recently when it was learned that a normal animal does not respond to the "S" material, but an animal that has been damaged in some way does respond. This damaging effect or priming could be done in the following manner:

1. Feeding aureomycin.
2. Spraying with DDT.
3. Spraying with chlordane.
4. Breathing carbon tetrachloride.
5. Human case suffering from leukemia.

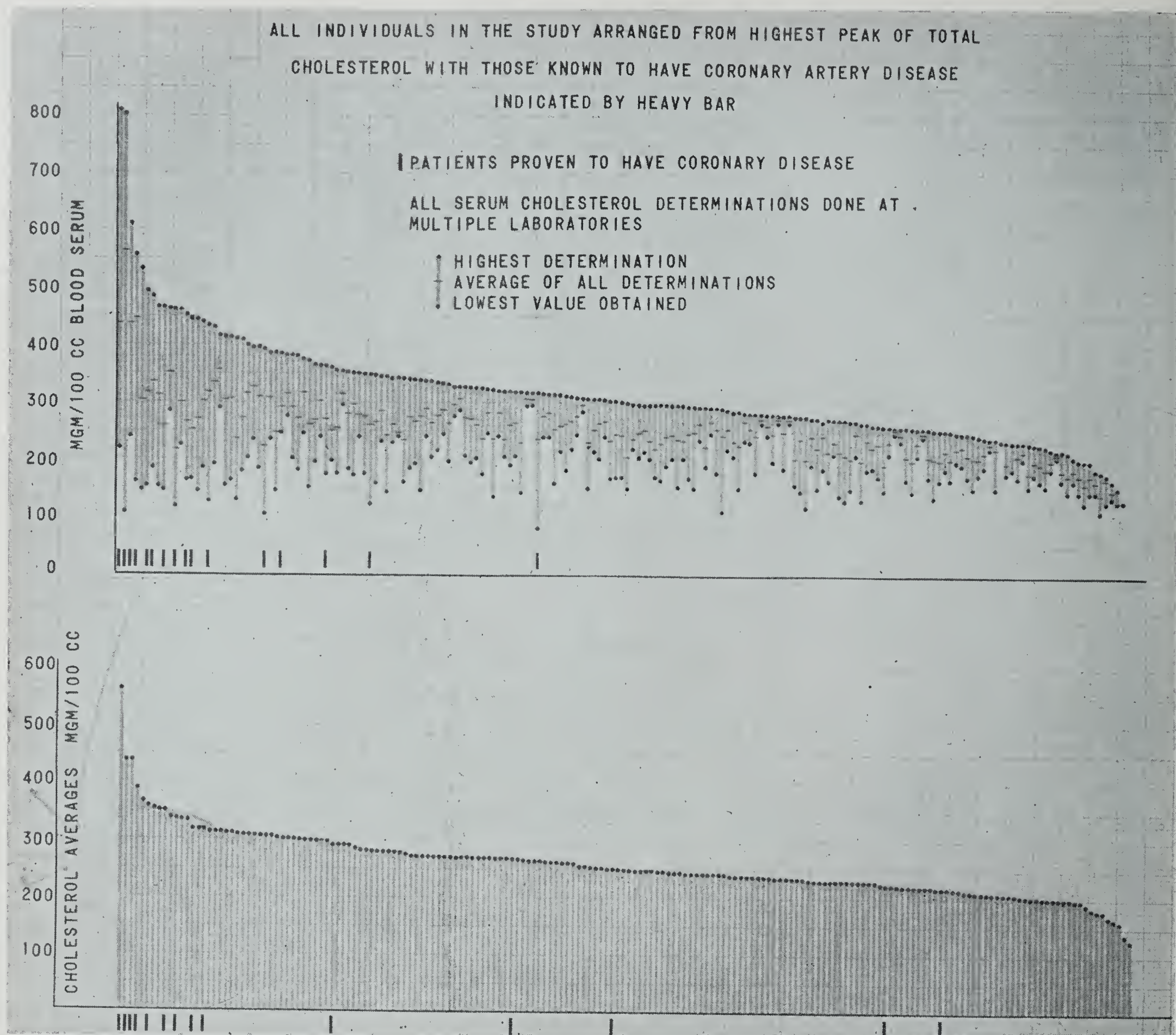


Fig. 15 and 15A. Individuals arranged according to average cholesterol values. Shows peak cholesterol with average.

6. One case recovering from pneumonia.

7. Rats suffering from a staphylococcus infection, and several other situations producing liver damage.

Dr. Seifter has found that liver damage is necessary to produce the hyperlipidemia in the peripheral circulation but that injection of the "S" factor produces a mobilization of fat from the portal drainage area loading the blood of the portal vein with triglycerides. If the animal has been primed, the peripheral circulation is loaded with cholesterol phospholipids and lipoproteins, reaching a peak two hours after the injection of the "S" material. This phenomenon is exactly what we have observed in our group of military personnel.

Figure 16 shows one of the Seifter experiments.

The hyperlipidemia is so marked that it can be detected by simple inspection of the centrifuged plasma.

Figure 17 is a cartoon I have drawn to demonstrate one possible mechanism of the production of "S" factor; and the next, figure 18, is a similar cartoon to show the theoretical effects of the priming phenomena.

The newer problems in coronary disease that are presented by this work are these:

1. Is the "S" factor a normal part of the human defense mechanism?
2. Is "S" factor produced only during emotional stress in certain people?
3. Does "S" factor produce changes in the arterial intima that accelerate the deposition of atheromatous material?

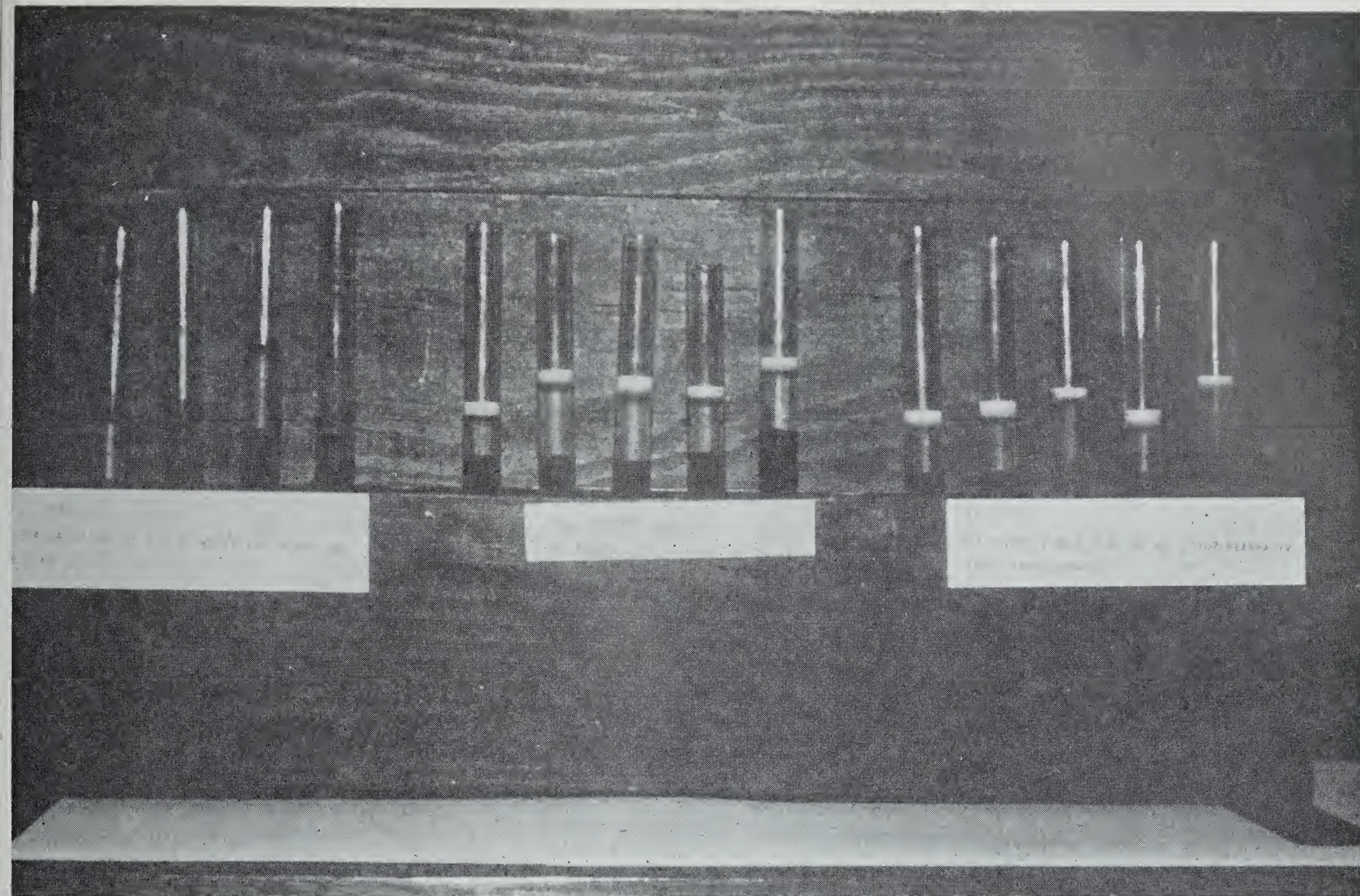


Fig. 16. Seifter experiment.

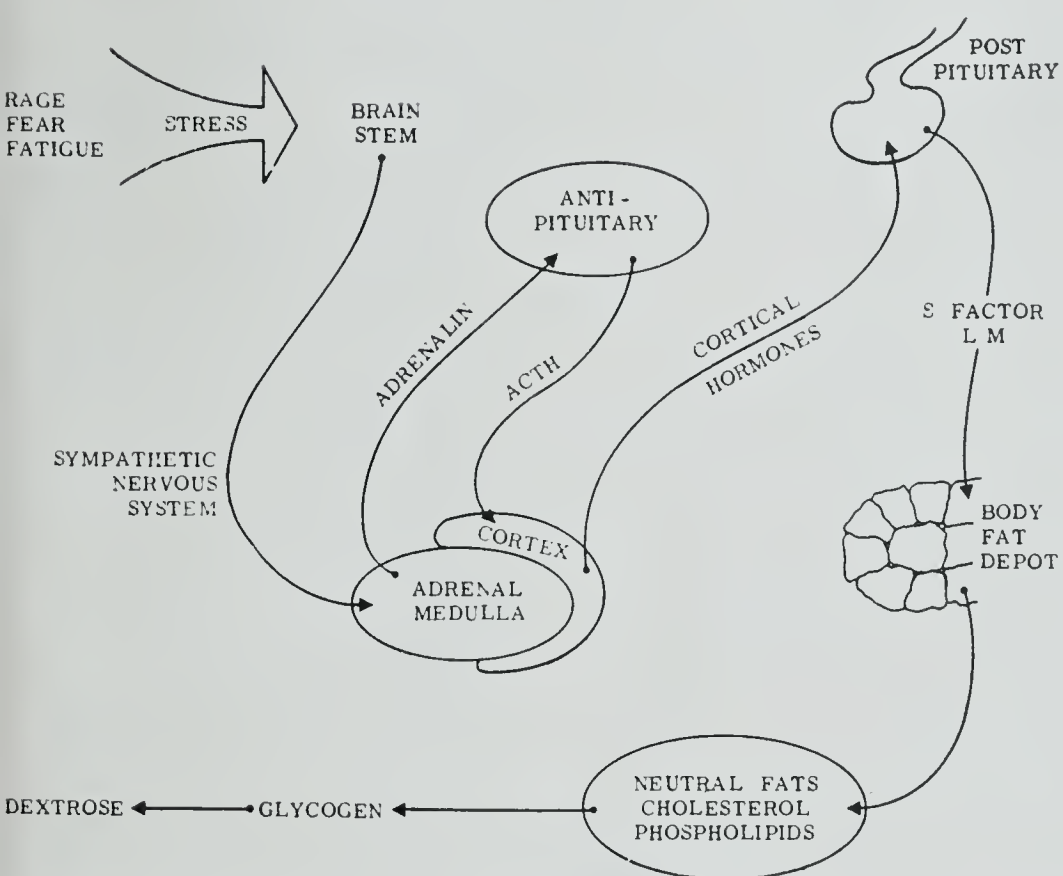


Fig. 17. Cartoon of theoretical production of "S" factor.

4. If "S" factor is present in all individuals, then the priming effect is the primary cause of hyperlipidemia and priming phenomena may be the real problem in the prevention of coronary disease.

5. What effect does the high fat diet of the American male have on the intensification of the hyperlipidemia of stress?

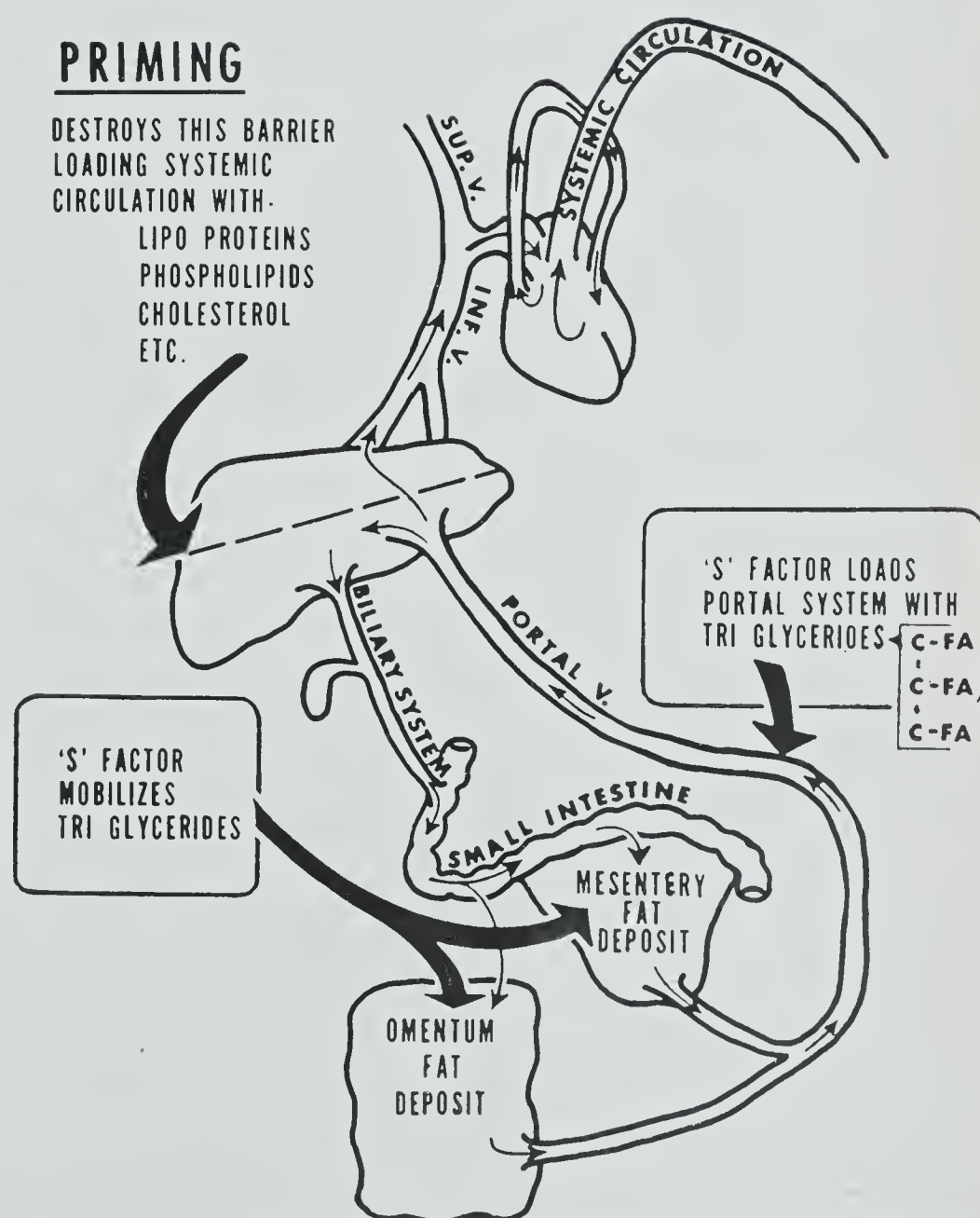


Fig. 18. Cartoon showing effect of priming factor.

6. If atheromatous lesions are the result of lipid concentration of the blood multiplied by the time a given concentration exists, then the acute fluctuation could be the cause of sudden myocardial infarct.

7. What is the effect of hyaluronidase produced by the male gonad on the rate of deposition of atheromatous lesions? Could this explain the estrogenic effect noted by Katz and Stamler?

8. What do dietary habits have to do with the production of hyaluronidase in the colon? And do the estrogens and androgens have enough anti-inflammatory action to prevent hyaluronidase injury to the intima?

SUMMARY

The problem seems to be one of a combination of factors influencing:

1. The rate of deposition of lipid material in the intima, and 2. those factors which mobilize lipid material once it has been deposited.

The "S" factor or lipid mobilizer factor certainly mobilized triglycerides from neutral fats stored in the portal drainage area. This material reaches the peripheral circulation only when the animal has been damaged or primed. This brings up the question whether "S" factor could be used to mobilize lipids from an atheromatous artery in a normal or unprimed animal. Experiments are planned to study this problem.

Apparently the rate of deposition of lipid material from the blood stream is influenced by concentration of lipids in the plasma. Certainly hyaluronidase increases this deposition and the anti-inflammatory hormones decrease or nullify the effects of hyaluronidase.

One cannot dispute the overwhelming evidence in the literature pointing to some relationship between hyperlipidemia and atheromatosis. The number of individuals living with abnormal serum lipids who do not show evidence of coronary disease over a considerable period of years compels

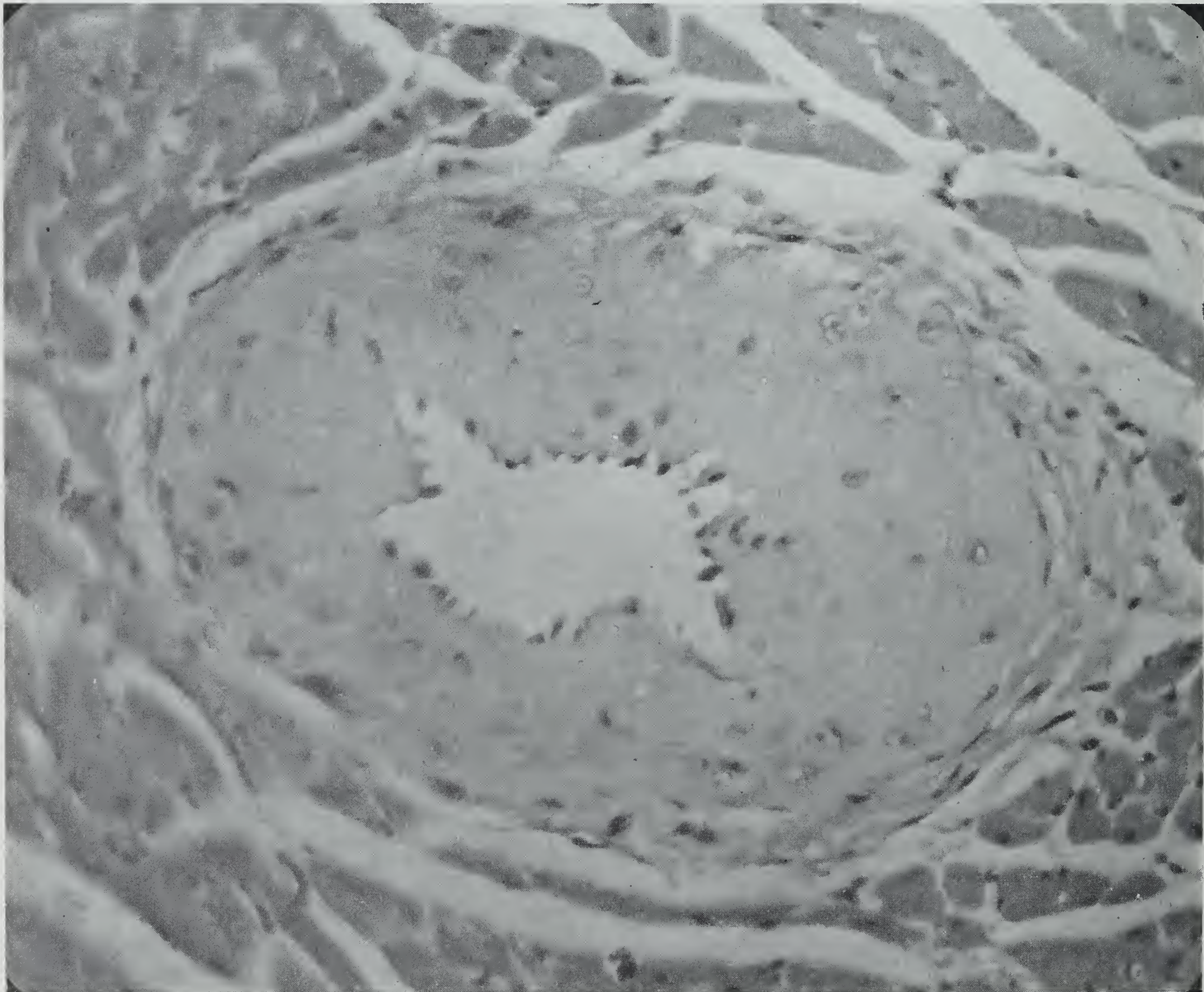


Fig. 19. Spontaneous intimal lesions in rat coronary.

one to think that other factors are necessary for the completion of the picture.

The spotty distribution of atheromatous lesions and the clinical importance of the location of the lesion make it very difficult to determine the extent of the disease from clinical observation, as one large, strategically located lesion can produce a fatal occlusion or severe angina in an individual with the remainder of his coronary tree relatively normal.

Whether estrogens and androgens exert enough anti-inflammatory effect to protect the arterial intima from the damaging effect of hyperlipidemia has not been determined, although the effect of these hormones on blood lipids has been shown.¹⁵ From our work on old male rats, chronically treated with androgen and estrogen, this seems to be the

15. Oliver, M. B., and Boyde, G. S.: Influence of Sex Hormones on Circulating Lipids and Lipoproteins in Coronary Sclerosis, *Circulation* XIII, No. 1. 83: 91, January 1956.

case, as the only intimal lesions found were in the control animals (Figure 19). These animals were not placed on atherogenic diets and we are not proposing that this lesion is identical to the lesions seen in the human.

The fact that emotional stress can cause transient hyperlipidemia and that these individuals do develop clinical or coronary disease has been demonstrated. At least one humoral factor has been isolated which can produce these changes in certain animals and certain human cases. This information confronts us with the fact that plasma lipids can be increased without a high-fat diet.

Emotional stress has been shown to produce the same changes in plasma lipids as can be produced by the injection of Seifter's "S" factor.

This work will have to be confirmed by others working in the field. With confirmation will come many new problems and an entirely new facet for future research in this field.

EARLY REPAIR OF A RUPTURED BRONCHUS

A CASE REPORT

CURTIS A. SMITH, M. D.

Mobile, Alabama

Rupture of the bronchi from closed intrathoracic injuries has been recognized for many years. In 1947 Kinsella and Johnsrud¹ reviewed 37 cases of traumatic rupture of the bronchus, none of which was treated by surgery, with only 1/3 survivals. The studies of Daniel,² Gebauer,³ and Abbott⁴ demonstrated that the trachea and bronchi were amenable to surgical attack and reconstruction. Scannell⁵ repaired a lacerated membranous portion of the bronchus with fine interrupted silk sutures. Paulson and Shaw⁶ repaired two ruptured bronchi

in two patients with dermal grafts and bronchoplastic procedures. Others reporting early repair of closed injuries of the bronchus are Thompson and Eaton,⁷ and Doughtry.⁸ A case of traumatic avulsion of the right main bronchus from the trachea with early repair is reported here.

Case Report: A 20-year-old white male drove his car into a tree at 6:00 P. M. on December 9, 1956. He was pinned beneath the steering wheel for approximately 30 minutes, and was brought to the emergency room of Mobile County Hospital at 7:10 P. M. At that time he was cyanotic and gasping for breath. He had marked subcutaneous emphysema extending over the entire chest, upper abdomen and neck. He had several small lacerations of the scalp. Breath sounds over the right chest were absent, and there was an audible air leak. Coarse rhonchi were heard over the entire left hemithorax. Blood pressure was 90/80, pulse 160, respirations 40. The neck veins were distended.

A tube was inserted in the second right interspace anteriorly, and connected to a water seal bottle, confirming the tension pneumothorax and massive air leak. An emergency tracheotomy was

1. Kinsella, T. J., and Johnsrud, L. W.: Traumatic Rupture of the Bronchus, *J. Thoracic Surg.* 16: 571, 1947.

2. Daniel, R. A., Jr.: The Regeneration of Defects of the Trachea and Bronchi; An Experimental Study, *J. Thoracic Surg.* 17: 335, 1948.

3. Gebauer, P. W.: Plastic Reconstruction of Tuberculous Bronchostenosis With Dermal Graft, *J. Thoracic Surg.* 19: 604, 1950.

4. Abbott, O. A.: Experiences with Surgical Resection of Human Carina, Tracheal Wall, and Contralateral Bronchial Wall in Cases of Right Total Pneumonectomy, *J. Thoracic Surg.* 19: 906, 1950.

5. Scannell, J. G.: Rupture of Bronchus Following Closed Injury to Chest; Report of Case Treated by Immediate Thoracotomy and Repair, *Ann. Surg.* 133: 127, 1951.

6. Paulson, D. L., and Shaw, R. R.: Bronchial Anastomosis and Bronchoplastic Procedures in the Interest of Preservation of Lung Tissue, *J. Thoracic Surg.* 29: 238, 1955.

7. Thompson, J. V., and Eaton, E. R.: Intrathoracic Rupture of the Trachea and Major Bronchi Due to Crushing Injury, *J. Thoracic Surg.* 29: 260, 1955.

8. Doughtry, D. C.: Discussion of reference 6.

performed. Oxygen was started by nasal catheter. The patient also received 75 mgm. of Demerol, and an infusion of 2,000 cc. of 5% dextrose in distilled water.

He failed to improve on this regimen, and his pulse remained at 160, and his respirations at 44-50. Continuous suction was applied to his chest at a pressure of -12 cm. of water. Over the next three hours his color slowly improved. His blood pressure rose to 120/85. However, his respiratory rate was 40, and his pulse 120-140. Much blood tinged mucus was aspirated from the trachea. He remained in essentially an unchanged condition for the next 24 hours.

On December 11, 1956 the patient continued essentially the same except that his color was slightly more cyanotic. His pulse remained at 120-140, and his respirations at 32-44. The air leak was unchanged in amount, and a portable x-ray revealed no further expansion of the right lung. A rupture of the bronchus had been considered from the time of injury, but the patient's condition was precarious and a bronchoscopy was not done. On December 11, 1956, approximately 40 hours from the time of injury, a right thoracotomy was done under gas-oxygen-ether anesthesia. The right main bronchus had been avulsed from the trachea and the lung was almost completely collapsed. The bronchus had retracted into the lung, and lay at a distance of about 5 cm. from the trachea. However, it was possible to do an end to end anastomosis with interrupted sutures of 4-0 silk. The lung promptly inflated, and there was no detectable air leak.

The patient's postoperative course was quite stormy. He developed bronchopneumonia of the left lung due to the spillage of the contents of the right pleural space. He had a persistent tachycardia of 100-120, and a tachypnea of 28-36 for the first ten postoperative days. His temperature returned to normal on the eleventh day and remained normal thereafter. Breath sounds were excellent on the injured side from the first. X-rays revealed prompt expansion of the lung, and the right lung field was clear, with a small fluid collection laterally. The chest tubes were removed on the third postoperative day, and although there was a small air fluid level laterally, this cleared without further treatment. The tracheotomy tube was removed December 23, 1956, and the patient was discharged December 24, 1956.

He did well at home, and his dyspnea improved rapidly. On January 2, 1957 a bronchoscopy was done at Providence Hospital. The site of anastomosis was detectable only by the appearance of one silk suture covered with granulation tissue on the posterior wall. The mucosa appeared to be entirely normal otherwise. There was approximately twenty-five per cent narrowing of the right

main bronchus, but the distal bronchial tree was easily visualized, including the right upper lobe bronchus, and appeared normal.

The following day the patient coughed up one silk suture. He has since had no further cough, and has no dyspnea. His strength has improved rapidly, and he returned to his usual job as a truck driver on January 28, 1957. He incidentally stated that he ran 200 yards in a race with friends to prove to them he had recovered.

DISCUSSION

Whenever a large air leak persists following closed chest injury the probable cause is rupture or laceration of the trachea or one of the major bronchi. The diagnosis may be confirmed in most instances by bronchoscopy, since most injuries are to sites which are readily visible. The diagnosis may be confirmed, also, by failure of the lung to expand and continuing air leak despite adequate treatment with tube thoracotomies and continuous suction. The treatment of choice is then an early thoracotomy with plastic reconstruction by fine interrupted sutures. With partial tears the bronchial vessels may be intact, but with complete severance of the bronchi they are damaged. The bronchi have an excellent collateral circulation, and healing will occur whether or not the bronchial vessels are intact. However, there is a tendency for stricture formation at the site of anastomosis which may be partially due to inadequate blood supply.

Treatment of partial or complete lacerations of the trachea or bronchi by excision of the involved lung should not be done unless the lung itself is badly damaged. Even when repair is delayed, and the bronchus has been sealed off by the mediastinal structures, a satisfactory repair is possible. The atelectatic lung is expandable and can function relatively normally, even as late as 15 years after injury according to Samson.⁹

1729 Springhill Avenue

9. Samson, P.: Discussion of reference 6.

Protecting the Health of the High School Athlete—

Curbing the number of unnecessary high school sports injuries and deaths is a community challenge. Physicians can provide the needed local leadership by working with school officials, coaches' association, parent-teacher groups and dental society to develop adequate school health and safety programs for sports participants. One practical method—discussed in a new American Medical Association pamphlet—calls for the sponsoring of high school sports injury conferences. Purpose of these conferences is to instruct coaches, athletic directors and team physicians on the early recognition of injuries, appropriate first aid measures, and the prompt referral of injured players for medical or dental care. Entitled "Protecting the Health of the High School Athlete," the booklet was prepared under the auspices of the AMA's Committee on Injury in Sports. Further information and copies of the booklet may be secured from the AMA's Bureau of Health Education.

OBJECTIVES OF PSYCHOTHERAPY

FRITZ KANT, M. D.

Birmingham, Alabama

Physicians and the public are realizing more and more the importance of psychiatric help.

The help the psychiatrist can give to the emotionally or mentally sick patient is of two kinds. There are the physical methods—insulin coma, electro-convulsive treatment, drug therapy—and there is the most important tool for the psychiatrist, the psychological approach with psychotherapy. The simple procedure of pushing the button on the electric machine in contrast to the harder work of psychotherapy may sometimes lead to an over-extension of the indication for electro-convulsive treatment. The latter definitely has its place and is very beneficial when we are dealing with true depressive reactions, and also in some cases of schizophrenic reactions. However, it is not indicated in the vast number of psychoneurotic reactions. Psychoneuroses or neuroses, two names meaning the same, are abnormal forms of behavior which arise from conflicts between contrasting psychological tendencies often precipitated by a psychological trauma. The latter may be either a single occurrence; for example, the death of a person on whom the neurotic was very dependent thereby increasing his insecurity, or it may be lifelong frustrations.

The vulnerable neurotic personality is formed and moulded to a large extent by unfortunate interpersonal relationships in the family, between parent and child or among siblings. The economic, cultural and educational level of the family is of much less importance than warmth and affection between the parents and towards the children. These create the foundation for the feeling of security.

The basic conflicts in the neurosis are innumerable. For example, the conflict may arise in an individual who is ambitious and has, at the same time, developed a vulnerable feeling of self-esteem, but lacks initiative and is inefficient. It may originate in an individual who is frustrated in his desire to realize his goals. Finally, there may be a discrepancy between strong drive demands of a sexual nature and a rigid super-ego. If we treat these neurotic reactions with so-called electro-shock, they may be subdued for a certain period and may appear superficially improved. However, their conflicts continue and the symptomatology of their neurosis will reappear after a shorter or longer period, possibly more severe than before the treatment. Psychotherapy at-

tempts to relieve anxiety and suffering and to change the behavior of an individual by psychological means for the purpose of better adjustment.

Because emotionally induced illness is so frequent, psychiatry has its part in every phase of medical practice to a greater extent than other specialties in medicine. It cannot be otherwise. Being sick, with all its aspects of suffering and frustration, physical impairment and economic disadvantage, necessitates an often painful and difficult readjustment to life. Here the danger arises that neurotic mechanisms come into play and interfere with the normal course of recovery. We know that at least 40% of all the patients who come to a physician's office suffer from personality disorders, and that in 70% of the patients emotional difficulties play a role in the whole picture. For this reason, every physician will have to, and actually does, practice psychotherapy in the broadest sense whether the physician is aware of it or not. Everything he says and does will be understood by the patient according to his personality needs. Not infrequently the attitude of the physician may have an unfortunate effect on the patient. One has spoken in such cases of iatrogenic illness, when hypochondriacal tendencies have been fostered by the physician's attitude. Most patients consulting a physician are in a state of some apprehension, wondering what the outcome will be, what will the doctor find? A remark about the patient's blood vessels, a worried expression on the physician's face, or a slight shaking of his head when he examines an electrocardiogram may set off worry snowballing in the patient's mind. Especially the neurotic patient is very sensitive to the attitude of the physician. He has been told by relatives and friends, but also by physicians, "There's nothing wrong with you; it's just your nerves." "Pull yourself together. Snap out of it. If you had any will power you would overcome it." These entirely negative statements are unfortunate. They are humiliating for the patient; his symptoms continue and he may then seek help from quacks. A positive attitude, by explaining to the patient what emotional states can do and how they affect physical functions, should be the first step in approaching these patients.

Although we distinguish psychoses from psychoneurotic reactions it does not mean that the neuroses are necessarily the milder reactions. Whether we are dealing with a conversion hysteria, a neurasthenia, an anxiety state or an obsessional neurosis, they all may lead to invalidism if they are not adequately treated. The same is true for the so-called psychosomatic illness, a condition in

Read before the Calhoun County Medical Society, Anniston, Nov. 19, 1957. The author is clinical Professor of Psychiatry, Medical College of Alabama.

which the emotional disturbance produces mainly physical symptoms and signs. A person not able to cope with his insatiable craving for superiority, with resulting hostility and resentment, may develop a gastric ulcer, which finally requires surgery.

Although we use a different name, the so-called psychosomatic illness is basically a psychoneurosis, an anxiety state in which the anxiety is responsible for the fixation on a certain organ whether this is the heart or the stomach. An example of a psychosomatic illness which was completely relieved with brief psychotherapy—the case was seen in its early stages—is the following:

A 32-year-old married woman, with three children, experienced a sudden pain in the heart region, accompanied by tachycardia, heart palpitation and weakness when returning from a Sunday family trip to her husband's parents. The patient was prostrate on a couch when the physician arrived and a heart attack was considered. From the time of her return home the patient stayed in her bed which had been brought down into the living room on the ground floor because she was afraid to walk. Two weeks later she was transferred by ambulance to the hospital in the neighboring town. The cardiologist found the heart to be normal. However, the tachycardia, with a rate of 110, continued, as well as apprehension of getting up. She was then referred to the psychiatrist.

The history was revealing and its discussion helped the patient understand the dynamics of her reaction. Raised in the East as an only child under unfortunate circumstances, the father being an alcoholic who abused her mother, patient left home after graduation from high school. Working as a stenographer she met her husband, an optometrist, who had a withered arm from polio in childhood. The husband drank to overcome his insecurity and anxiety when dealing with the public. He spent his evenings in a tavern. Later he drank also at lunch. Finally he took a shot before breakfast to overcome the after-effects of the evening before. In an attempt to curb his drinking, patient started to accompany him in the evening and drank with him. The evening before the visit to the in-laws the couple was out drinking late. Early in the morning they had to depart on the trip. Patient felt bad from a hangover and lack of sleep, but she had to keep up a good front during her visit with the in-laws. Returning home she was exhausted, and, recalling the misery of her own childhood in the shadow of an alcoholic father, it flashed through her mind: "Where are we coming to? He is drinking, I am drinking, we have three children, what shall become of them?" A state of anxiety panic was the result. In the course of only four psychotherapy sessions, patient regained her composure.

It is not always so simple to get at the underlying dynamics.

We distinguish the supportive and the uncovering type of psychotherapy. With supportive, we mean reassurance, explanation and suggestion, including hypnosis which is a strong form of suggestion. Also, environmental manipulation is a part of supportive psychotherapy. It was indicated in the case of conversion hysteria originating from a family conflict.

A 20-year-old woman, married for only one year, was admitted to the hospital because of paralysis of both legs and anesthesia from hips to toes. This had been present since the evening before when patient was setting the supper table in the home of her mother-in-law. She stumbled, fell, and was not able to get up. The husband and mother-in-law carried her to bed. The neurological examination showed the psychogenic nature of the paralysis and anesthesia. Both disappeared rapidly with suggestive therapy. The history revealed that the husband, a 27-year-old school teacher, the only child of a widow, had married patient against the wishes of his mother. The couple lived in a little town 15 miles from the mother-in-law's residence, but they had to spend every weekend with her. From the start, the mother-in-law criticized the patient on every occasion and, when the latter raised a timid objection, was offered no support by her husband. In fact, he always sided with his mother. Under these circumstances, patient had lived for one year and finally was unable to cope with the situation. She felt powerless and this expressed itself in a symbolic way when she stumbled and was not able to get up, not having the power to use her legs. In addition to helping the patient understand her reaction and ways to cope with her difficulties, it was necessary to convince the husband to accept his role as husband and emancipate himself from his mother.

The uncovering, or deep form of psychotherapy, will remain the domain of the psychiatrist if for no other reason than that the busy general practitioner or specialist will not have the time it requires. Uncovering psychotherapy detects the sources of feelings of guilt, insecurity and inferiority which are three complexes around which most psychoneuroses develop. They are in the unconscious and, therefore, deep psychotherapy requires acquaintance with the working of the unconscious, the mental mechanisms and the process of symbolization.

Diagrams in the form of squares or circles, indicating the conscious, the preconscious and the unconscious, may give the impression that the unconscious is a kind of chamber somewhere in the brain or elsewhere in the body of a human being. What the term unconscious means is the fact that we have desires, cravings, feelings or thoughts of which we are not aware, but which, nevertheless, are responsible for our behavior. Proofs for the fact that there is an unconscious in this sense are many. The posthypnotic suggestion would be one.

The mental mechanisms we mentioned are means of self-defense. Among these are (1) repression—the exclusion of painful and unpleasant material from consciousness. It protects us from remembering occurrences which made us feel guilty or humiliated; (2) rationalization—the substitution of a fictitious motive for the true motive for our action. A mother who is socially very active sends her children to a boarding school, rationalizing that the school is better. Her real motive is to have more time for social engagements; (3) displacement—a mechanism by which an emotion is transferred from its original source

to a substitute; and (4) symbolization—an expression, an action or an object which becomes a representative substitute for another.

In the following case we find repression, displacement and symbolization at work:

A 23-year-old married woman came to the Psychiatric Out-Patient Department at the urgent suggestion of her husband because of an uncontrollable impulse to wash her hands continually. Patient's hands appeared red and raw when first seen. She had been unable to resist this impulse although she recognized that there was no need for such frequent cleansing. If she did not obey the impulse, however, she felt uneasy to the point of panic. Besides the hand-washing, patient had the compulsion to mend her baby's clothes and her husband's underwear over and over again. In doing this she would keep the light on into the night. These compulsions had been present since the birth of her child, 18 months previously. Soon after the child's birth she also developed the fear of harming the baby. She was afraid of choking the baby; when close to an open window, of throwing it out, and when in the kitchen of cutting it with a knife. This phobia made it impossible for the patient to stay alone with her child and her mother finally had to take on its care.

Patient came from a broken home, and developed into a self-conscious and shy girl. Pertinent to the origin of her serious compulsive and phobic reaction was the fact that at the age of 15 years she became attached to a boy her age, a classmate. "He was good looking and a lot of fun." They went together for four years and she was deeply in love with him. When seniors in high school their relationship was intimate, and patient became pregnant. The boy assured her that they would marry right away, and told his parents about his plans. He was from a socially prominent family and his parents were "shocked" when they learned what had happened. They forbade him any further contact with the girl, who was without social standing, and took him immediately to a prep school in the East. Patient did not see her boy friend any more nor did she hear from him. She did not return to school, became despondent and attempted suicide by taking a large number of sleeping pills. Her recovery was slow, and while still drowsy she fell down a flight of stairs and shortly afterwards expelled the fetus. About a year later a boy who had always admired her in school, but had not approached her because she had been going steady, asked her for a date. After a courtship of only three weeks they were married. She had told him of her pregnancy and her suicide attempt.

Patient appreciated her husband's devotion and consideration, she wanted to be married and forget about her sad love experience. However, day dreams about her former lover, often of a sexual nature, continued during her married life. When she expected her child, she wished it would be from her former boy friend. These thoughts had been repressed and were recalled in the course of therapy. Patient realized the symbolic meaning of her compulsions. By washing her hands she removed her "unclean" thoughts, by mending her husband's and the baby's clothes, she "mended" her ways and made up to them for her unfaithfulness in thoughts. The phobia of harming her child was a displacement of anxiety originating from feelings of guilt because she had wished her child from another man. With the dynamic understanding of her illness came a revision of her attitude towards her former boy friend.

In a case of this kind it takes time before the patient will achieve an understanding of the meaning, purpose and origin of the symptoms. By letting the patient discuss freely her entire life, starting with earliest memories, many so-called forgotten patterns of disappointment, unhappiness, hostility and frustration will come to consciousness. Thereby the patient can realize how earlier experiences have moulded and formed her present attitude and behavior.

In addition to bringing unconscious conflicts to a solution, the patient should be helped to recognize not only his liabilities but also his assets which may lie dormant. He must be encouraged to develop these to the fullest.

Psychotherapy can prevent much unhappiness and anxiety, leading not so infrequently to emotional invalidism. It can prevent the development of organic disease originating from constant emotional tension. If we always keep in mind what an emotional disturbance can do, when we see a patient, much is already accomplished.

Only he who understands human nature well will be able to follow the often peculiar pathways of the emotionally sick. This understanding cannot be learned from books or in the psychological laboratory, but only through constant sympathetic contact with human beings.

1601—11th Avenue S.

Two Civil Defense Programs Scheduled In San Francisco—Two medical civil defense meetings will be held in San Francisco immediately preceding the American Medical Association's 107th Annual Meeting. On June 19-20, the 12th Naval District will sponsor a symposium on "Medical Problems of Modern Warfare and Civil Defense" at the U. S. Naval Radiological Defense Laboratory, and on June 21 the AMA's Council on National Defense will sponsor its 6th Annual National Medical Civil Defense Conference in the Sheraton-Palace Hotel. Dr. David B. Allman, AMA president, and Frank W. Barton, secretary, AMA Council on National Defense, will speak at the naval symposium on the plan and activities of organized medicine for medical preparedness in disasters or in the event of all-out war.

Dr. Gunnar Gundersen, AMA president-elect, will welcome participants to the AMA's civil defense meeting on June 21. The current federal civil defense program, including the national plan for mobilization of resources (personnel, facilities, supplies) will be outlined during the morning session by officials of federal governmental agencies involved. Also scheduled for the morning session will be a discussion of the threat and impact of newer weapons and delivery systems by an outstanding military planner, and a report on the legislative program now pending before congress for a national survival plan by the Hon. Chet Holifield, U. S. congressman, 19th district of California.

During the afternoon, the Surgeons-General of the Army, Navy, Air Force and Public Health Service will discuss the civil defense role and responsibilities of civilian physicians. Two other subjects to be covered include the radioactive fall-out problem and the feasibility of a national shelter program.

CARCINOMA OF THE FALLOPIAN TUBE SIMULATING ACUTE APPENDICITIS

A CASE REPORT

J. P. MUDD, JR., M. D.

Jackson, Alabama

A 70-year-old Negro female was admitted to Jackson Hospital in February 1955 complaining of severe lower abdominal pain and tenderness. Her family physician had previously treated her for severe arterial hypertension. The pain that started fourteen hours prior to admission was associated with nausea and vomiting, and she had fainted once. A vague history of lower abdominal discomfort present for the preceding week was obtained.

Physical examination indicated an acute illness in a markedly obese female with an estimated weight of over 250 pounds. Blood pressure was 285/135, pulse rate 70 per minute, and respiratory rate 28 per minute. On auscultation the abdomen was silent, and there was marked tenderness and rebound tenderness of the lower half. Rectal and pelvic examinations elicited extreme pelvic peritoneal tenderness. No masses were palpable.

The urine contained 6 to 8 W.B.C. per high power field. The hemoglobin and leukocyte count were normal, and the blood urea nitrogen was 10.5 mg. per 100 cc. of blood. A small amount of milky fluid obtained by paracentesis was stained, and pus cells, but no bacteria, were seen.

Under general anesthesia a celiotomy was performed for acute appendicitis with spreading peritonitis. The procedure was hampered by the obesity. Upon opening the peritoneum a small amount of odorless milky fluid was noted. The appendix, uterus, and left fallopian tube were normal and the ovaries were atrophic. The right fallopian tube appeared greatly enlarged, hemorrhagic, gangrenous, and covered with a soft plastic exudate. This fallopian tube was removed and the abdomen closed.

The pathologist reported a fallopian tube of 8 x 2 cm. and showing an extensive neoplastic process within the lumen. A diagnosis of grade IV carcinoma of the fallopian tube was made. The pathologist commented: "The case is of unusual interest and apparently represents carcinoma developing within the lumen of the fallopian tube. The tumor is papillary in type, apparently originating from the villi of the fallopian tube. The lesion appears completely excised, although the prognosis is very poor. Metastasis has most certainly taken place."

The patient recovered from the salpingectomy and was discharged on the eighth hospital day. The Mobile Tumor Clinic advised against further therapy. A niece of the woman reported that she died in January 1957, approximately twenty-three

months after undergoing salpingectomy. An autopsy was not performed.

Chemical Warning Label Advantages Listed—Warning labels against misuse of possibly dangerous chemical products do not frighten away customers; do not give away trade secrets, and are useful even though children can't read them.

These refutations to oft-repeated objections to careful precautionary labeling of common chemical products were made by the secretary of the American Medical Association Committee on Toxicology in the April 26 A.M.A. Journal.

Bernard E. Conley, Ph.D., said, "The fear that trade secrets are lost through label declaration . . . is ill-founded and happily fewer firms now have this attitude."

Experience has also shown that warnings against misuse do not frighten away customers, but engender confidence that the product can be safely used if directions are followed.

Child poisoning occurs not because the children can't read the labels, but because harmful substances are easily accessible. The parent is not overtly careless but fails to realize that many familiar products are capable of harm. Label warnings would counteract this easy familiarity which breeds carelessness, Dr. Conley said.

A recent survey showed "a sketchy, nonuniform, and generally inadequate pattern" of labeling regulations at state and national levels.

In an attempt to provide more uniform labeling laws, the A.M.A. committee has drafted a model law requiring precautionary labeling of dangerous substances in commercial, household, and industrial chemicals. The bill is presently being distributed. Interest in the bill has been expressed by a number of groups, including state legislatures and Congress.

In considering the provisions for a model law, the committee adopted a set of principles that are "reasonable and reflect current knowledge of the toxicity of chemicals and the conditions under which they are employed," Conley said. For example:

—Precautionary labeling should be applicable to all chemical products containing hazardous substances which are not now specifically regulated. The same labeling standards should apply to chemicals for export as to those for domestic use.

—While exact standards of toxicity cannot always be established, they often can be based on animal tests since these provide a consistent and reliable index of poisoning properties of a chemical.

—The term "poison" should be abandoned in view of the wide variation in the term's legal and scientific definitions. In lieu of a generally accepted definition of poison, substances capable of serious injury or death to any age group are dangerous chemicals and should be so designated on the label.

—The labeling should be based on the anticipated degree of danger and should use words and symbols that indicate that degree.

Doctors Tell Summer Eating Rules—Television, air conditioning, and eating between meals have combined to produce a new hot weather syndrome among children, two Dallas pediatricians said recently.

It is characterized by the "pale, flabby, tired child who has gained excessive weight during the warm weather because he has stayed in an air-conditioned house watching television most of his waking hours and has indulged in frequent between-meal snacks that have spoiled his appetite for well-balanced meals."

Poor appetite in the summer and faulty eating habits may result from uncontrolled use of cold, high-caloric drinks or food, from failure to take adequate exercise, and from overindulgence in between-meal snacks.

A procedure for avoiding these problems was outlined by Drs. Floyd A. Norman and Edward L. Pratt in a special report on feeding children during hot weather, prepared for the American Medical Association Council on Foods and Nutrition. It appears in the April 26 A.M.A. Journal.

They first pointed out that hot weather imposes no special dietary requirements for children. They need the same well-balanced diet they always need, along with extra water. They do not need additional quantities of salt. Only adults under "conditions of great physical activity associated with extremely large outputs of sweat" need sodium chloride tablets.

The doctors pointed out that it is unwise for adults to condition children to dislike hot weather or to foist summertime food fads on them.

Their rules for maintaining good nutrition and eating habits among children are:

—The habit of vigorous outdoor activity should be continued or developed. Children do not mind hot weather unless they are conditioned to dislike it.

—Cool, but not cold, drinks are best, and, for the most part, water should be used to quench thirst.

—Between-meal foods and high-caloric drinks may have to be controlled.

—A short "cooling-off" and quiet period before meals may increase the child's appetite.

—Limiting of high-caloric foods, such as peanut butter and ice cream, may be necessary.

—The large and better balanced meal may best be served in the evening when the temperature is lower.

—All of the usual measures and guides for developing good eating habits should be continued, irrespective of the weather.

They noted that if infants and children eating well-balanced diets do not tolerate ordinary heat, they should be examined for illness rather than changing their diets.

The authors are affiliated with the department of pediatrics, University of Texas Southwestern Medical School, the Children's Medical Center, and Parkland Memorial Hospital, Dallas.

Medical Grievance Committees Spread Across Nation

—More than 1,100 American county and state medical societies now have "medical juries"—grievance committees organized to mediate differences between doctors and patients.

The accomplishments and aims of grievance committees are outlined in a special article and editorial in the April 5 Journal of the American Medical Association.

Medical grievance committees are not really new. Since 1871 the committee on ethics and discipline of the Massachusetts Medical Society has been mediating the complaints of patients. What is new is the spread of the committees across the nation. During the last 10 years more than two thirds of the county societies and all the state and territorial associations have organized them.

Serving on these committees are between 5,000 and 10,000 physicians who fearlessly "judge complaints routinely in the twin light of public interest and professional service," the article said.

On one hand a committee may rule in favor of the patient saying, for instance, about the doctor involved, "Fee for prenatal visits considered excessive."

On the other hand, it may decide in favor of the physician. One example is that of the patient who protested that he was charged \$40 for "just one office visit." Investigation showed that, at his own request, the visit entailed a thorough examination including a fluoroscope study, electro-cardiogram, and extensive laboratory work. When he understood what the fee covered, he withdrew the complaint with apologies.

The majority of complaints against doctors are "due not to incompetence or greed but to misunderstandings—misunderstandings which could have been dispelled quickly if there had been an opportunity to determine the cause in frank discussion," the article said.

"So many complaints have been caused by a misunderstanding of the basis for a doctor's fee that grievance committees spend a good deal of time emphasizing the importance of discussing costs before, and itemizing bills after, medical service," the article continued.

The A.M.A. has taken a double-barreled approach on fees—urging doctors to discuss fees before service and calling upon state and county societies to crack down on the few doctors who have been overcharging.

Most grievance committees do not mete out punishment when they find a complaint justified. A Colorado spokesman has pointed out that "You cannot be prosecutor, judge, and jury all in one body." When disciplinary action is needed, it is usually referred to the appropriate judicial body of the association.

Most of the committees are composed of physicians only, but some include laymen—lawyers, ministers, and businessmen. Inclusion of laymen is still in the experimental stage, according to the A.M.A. Council on Medical Service, the article said. "But they may serve to strengthen community trust in the impartial attitude of the committee. . . ."

However, one West Coast woman was quoted as saying, "In our community we know the doctors are working to protect us, not other doctors' careers."

One way to help the community know about the grievance committees is to publicize them, the article said. The Council on Medical Service has pointed out that the service "cannot succeed unless the public knows of its existence and understands how to use it."

The Journal editorial said the grievance committee is "here to stay as an integral part of our profession. In the years ahead only technique may need refinement. . . ."

NEXT ANNUAL SESSION
BIRMINGHAM
APRIL 9, 10, 11, 1959



Editorials

AMERICAN MEDICAL EDUCATION FOUNDATION

During this month of May the doctors of Alabama will be given an opportunity to express their support of medical education by making a contribution to the American Medical Education Foundation.

AMEF was established by the American Medical Association as a channel through which the medical profession may contribute to the medical schools of the nation. All operating costs are paid by the A. M. A., so that the donations in full go to the medical schools for their unrestricted use. All contributions are tax deductible and may be earmarked for a specific school.

The question is often asked whether a physician should give direct to his school through the alumni program or give to the A.M.E.F. earmarking his gift for his Alma Mater. The answer is that it doesn't matter so long as he gives but we would like to have a contribution through both channels.

Last year only about 10% of the doctors in Alabama gave directly to the alumni programs or through A.M.E.F. This seems to prove conclusively that we as physicians need to be educated to the pressing financial need that exists in our medical schools and the appeal this month is directed to those members of the profession who have not yet given their financial support either to the American Medical Education Foundation or to the medical schools from which they graduated.

The A.M.E.F. campaign this month will be a success in Alabama if each of us contributed a minimum of \$5.00 toward our goal of \$10,000.00. We hope you will make your contribution immediately since our drive ends on May 31st.

COLLEGE OF SURGEONS' ESSAY CONTEST

The American College of Surgeons, Alabama Chapter, has announced the 1958 Essay Contest for surgical residents in the state of Alabama. To be eligible to participate a physician must be a surgical resident or a resident in one of the subsurgical specialties.

Manuscripts should be addressed to Dr. Hugh

Linder, 2211 Highland Avenue, Birmingham, Alabama. Dr. Linder is chairman of the committee for selecting the winning essay. The closing date is October 1, 1958, and the committee has requested that entries be submitted in September if possible.

The winning essay will be presented at the state meeting of the College of Surgeons in Point Clear next February. The prize is an "all expense paid" trip to Point Clear for the winner and his wife for the occasion and the presentation of the essay before the membership.

Further information may be obtained from Dr. Linder at the address given above.

NOTICE TO FORMER GRADY HOUSE STAFF

An organization is being formed which is to be composed of all former members of the House staff of Grady Memorial Hospital in Atlanta. Two years ago letters were sent to all known former House Officers. However, we know many names were not included because of an incomplete mailing list. If you did not receive a notice or failed to reply for any reason, please notify our office and let us know your name, address and when you were at Grady. Plans are now being made for our first annual meeting next fall. Address: Grady Hospital Clinical Society, Office G-610, 80 Butler Street, S. E., Atlanta, Georgia.

USE OF KRYPTON 85 IN DETECTING HEART ABNORMALITIES

Research at the Public Health Service's National Institutes of Health has shown that Krypton 85, a radioactive form of a harmless inert gas, can be used to detect abnormal openings in the wall of muscle dividing the right and left chambers of the heart.

Left to right shunts of blood which result from defects in the partitions of the heart are the commonest form of congenital heart disease. Accurate knowledge of the presence and location of these defects is essential for corrective surgery.

The new diagnostic technique was developed by research surgeon Richard Sanders, a staff member of the Clinic of Surgery of the National Heart Institute of the Public Health Service. The dis-

covery was announced in the January issue of the technical journal *Proceedings of the Society for Experimental Biology and Medicine*.

Experiments using a different radioactive inert gas successfully in detecting heart abnormalities are reported in the same journal. Dr. Sanders bases his choice of Krypton on its complete inertness and ready availability. In addition, 99 per cent of Krypton 85's radiation is non-penetrating, making elaborate precautions for its use unnecessary, even for medical workers who are repeatedly exposed.

Krypton 85 can be measured instantly and accurately with an instrument similar to a Geiger counter after the gas has been introduced into one side of the heart and some of it has been recovered from the other. This makes the test simpler than any previous laboratory techniques, and the test is more accurate than the standard techniques now being used in most heart clinics. More than 100 patients with proved forms of heart disease have been studied, and Krypton 85 has made possible the correct diagnosis in every instance.

In developing the technique Dr. Sanders used dogs with heart defects which produced left to right shunts. He introduced radioactive Krypton into the left side of the heart by having the dogs breathe it, mixed with air, from an ordinary rubber anesthesia bag. The radioactive gas was instantly picked up by the bloodstream from the lungs and carried to the left side of the heart, along with normally oxygenated blood destined to supply the dog's whole body.

In a perfect heart this blood does not enter the right side of the heart until it has completed the circuit through the arteries to the body and returns through the veins into the right side of the heart ready to be sent, from the right side, to the lungs for a new oxygen supply.

In Dr. Sanders' experimental animals the normally high pressure in the left side of the heart forced the blood not only into the artery leading to the rest of the body but also through the holes in the partition between the left side of the heart and the right. This robbed the dog's body of part of its needed blood supply and is what happens in a human being with congenital heart defects in which the blood is shunted from left to right.

Using the technique of catheterization, with his experimental animals, Dr. Sanders threaded a length of tiny plastic hose through a neck vein feeding into the right side of the heart. Through this tube, he could draw blood directly from the right side. In a normal dog breathing radioactive Krypton, samples of blood showed very little radioactivity—the radioactive gas had been largely dissipated on the long journey of the blood around the body.

When Dr. Sanders tested blood from the hearts of the dogs with heart defects, however, he found it to be much more radioactive, which showed the presence of the defects. By aiming the tip of the catheter at different parts of the heart, the location of the defect can be determined.

Many heart defects involving left-to-right shunts can now be repaired by surgery, but more than 1,000 persons, most of them children, die of these defects each year in the United States, and thousands more are crippled.

BENEFIT PAYMENTS BY INSURANCE COMPANIES IN 1957

Benefit payments by insurance companies to Americans protected by health insurance policies amounted to a record \$2.5 billion in 1957, the Health Insurance Institute reported recently. This figure, the Institute said, represents a 16.1% increase in benefit payments over the \$2.1 billion paid in 1956.

Latest figures supplied by the U. S. Dept. of Labor in its 1957 Consumer Price Index showed that medical care costs during the year rose by 4%.

The Institute report is based upon a survey of the nation's insurance companies writing policies which help pay for doctor and hospital bills and for loss of income incurred as a result of accident or sickness.

The survey revealed that reimbursements through group insurance plans in force during the year totaled \$1.8 billion, or 21.3% over 1956, while payments through individual and family type policies amounted to \$619 million, a rise of 3% over the previous year.

Payments to policyholders covered under hospital expense insurance policies, the Institute further reported in listing the figures by type of service, amounted to over \$1 billion, with \$778 million paid under group policies and \$224 million paid by insurance companies to individual policyholders.

Reimbursements to defray the cost of surgeons' fees totaled \$398 million, with \$322 million received by holders of policies under group plans, and \$76 million paid to persons covered by individual surgical expense insurance policies.

Persons covered for non-surgical medical care and treatment through regular medical expense insurance policies received a total of \$71 million during the year. Group policyholders received \$61 million while those covered by individual policies were paid \$10 million.

Benefit payments to those protected against the cost of serious, or catastrophic illness or accident through major medical expense insurance policies, including supplemental and non-supplemental cov-

erage to the basic health cost plans, amounted to \$130 million. Group plan payments totaled \$126 million, while individual contract benefits came to \$4 million. Of particular note, added the Institute, is the fact that payments in 1957 through major medical policies, the fastest-growing form of health insurance, increased by 100% over the year 1956.

In concluding its report of payments for health care by the insurance companies throughout the United States, the Institute stated that the increase in such payments reflects the continued efforts of the public to pay its doctor and hospital bills through the voluntary non-governmental mechanism.

The Health Insurance Institute is the central source of information for the nation's insurance companies serving the public through voluntary health insurance.

REHABILITATION FACILITIES NEEDED

The provision of rehabilitation facilities for the growing number of disabled older people offers a current critical problem, a hospital administrator said in the March 16 issue of *Hospitals*, Journal of the American Hospital Association.

Carl K. Schmidt, Jr., superintendent, Oak Forest (Ill.) Hospital, writing on "Day-By-Day Care for Years to Come," pointed out that "long life may become a burden to community resources—as increased age means increased chances of disability and hospitalization."

"People who are working with the rehabilitation problem recognize its current status as critical. Part of the problem arises from a lack of beds and rehabilitation personnel and facilities, part from the rising cost of health care, and part from the lack of coordinated planning," Mr. Schmidt said.

He listed as necessary "to keep the problem within manageable limits":

1. Broadening of the hospital's rehabilitation services to provide both beds and the space and equipment needed for ambulatory patients.
2. Establishment of minimal units for chronically ill and disabled patients.
3. Cooperation between the community hospitals which cannot provide a complete rehabilitation service, and nearby hospitals and health agencies, with shared facilities.
4. Follow-up of the patients discharged to their homes.
5. Outpatient rehabilitation services for ambulatory patients.
6. Home care programs and day care programs where the patient is admitted to the hospital for the day only.

Mr. Schmidt pointed out that "the voluntary hospital cannot serve long-term patients unless it is adequately financed."

Steps toward a solution of the problem of financing include recognition of the need for better financing of hospital care in the Old Age and Survivors Insurance program, the various major medical plans for catastrophic illness, and Blue Cross plans for extended coverage, Mr. Schmidt pointed out. "The major test is yet to come . . .," he said.

"Lack of proper financing of long-term care is a serious limitation on adequate rehabilitation services."

Another problem is prevention of long-term illness. Regular health examinations for the well population might aid in solving this problem, but in practice such a program would be difficult to implement, Mr. Schmidt said.

THIRTY-FIFTH ANNUAL CONVENTION

WOMAN'S AUXILIARY TO THE AMERICAN MEDICAL ASSOCIATION, SAN FRANCISCO, CALIFORNIA, JUNE 23-27, 1958

A cordial invitation is extended to all members of the Woman's Auxiliary to the American Medical Association, their guests and the guests of physicians attending the convention of the American Medical Association, to participate in all social functions and attend the general meetings of the Auxiliary. Headquarters will be at the Fairmont Hotel.

New Oral Iron Causes Few Side Effects—A new oral iron preparation that produces few adverse gastrointestinal side effects has been reported by four Illinois researchers.

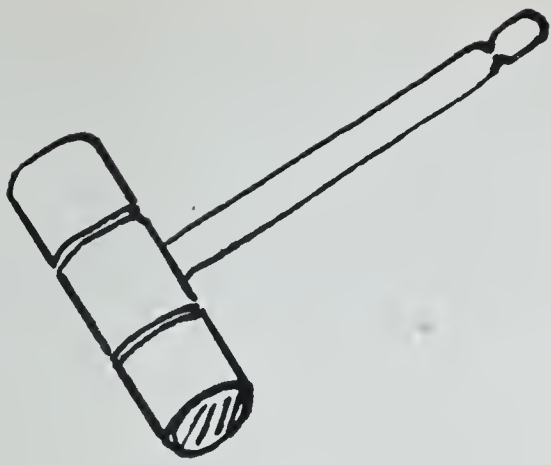
One of the common problems associated with oral iron preparations—given for anemia caused by iron deficiency—is the development of severe gastrointestinal upsets, especially among children. These preparations are also potential poison to children if they are taken in large doses, the researchers said.

However, the new preparation, iron choline citrate (Ferrolip) appears to be safer than other preparations, they said in the April 5 Journal of the American Medical Association.

The iron has undergone the chemical process of chelation, in which the iron is bound into a form similar to that in which iron is held in the hemoglobin. "It is not surprising," therefore, that the presentation of iron to the system as a chelate complex minimizes adverse aspects of iron treatment.

The researchers gave iron choline citrate tablets to 131 patients suffering from iron deficiency anemia. They were given between meals on an empty stomach in order to minimize any effect of food decreasing gastrointestinal symptoms. Few of the common symptoms, such as nausea, vomiting, abdominal cramps, diarrhea, and constipation, appeared.

The iron choline citrate was effective in treating the iron deficiency anemia and was "outstanding" in terms of freedom from undesirable side effects, they said.



President's Page

Let me take this opportunity to thank you for electing me your President. My father and grandfather Givhan were both members of this Association. My great grandfather Peterson was a member of the group which met in Selma after the War Between the States to reorganize our Association and to begin its present history. You can do me no greater honor than to elect me your President.

When one views the prospect of the work of the Association for the coming year, he cannot fail to be impressed by the tremendous increase in useful activities in which we are now engaged and the many necessary functions which we are asked to perform. Our annual meeting still affords us an opportunity to meet together and see old friends; to tell a few stories and give a few case reports; and to listen to good scientific papers if we are so minded. Of equal importance, the Association must at its annual meeting pass on the activities of its numerous committees which have been busy during the past year. When one reviews the tremendous scope of the activities of the various committees one cannot but be impressed by the responsibility that faces this Association on the final day of its annual meeting.

I shall not attempt to discuss the activities of all our committees, but I would like to mention a few that seem of particular importance to me today. Your Board of Censors acting as a Board of Medical Examiners faces a continuing problem to keep the practice of medicine in Alabama on the highest professional plane and to protect the people of Alabama from those who would attempt to exploit them with various fads and cults. Your Board of Censors acting as a State Committee of Public Health continues to work with the Health Department in providing the best possible public health system for the people of Alabama. To this department has been added the responsibility of a state plan of hospital construction under the Hill-Burton Act. To me this has been one of the most important activities to confront our Association. It requires the best brains and long hard hours of work for many of our members.

Alabama now has a law providing for the medical care of the indigent. It is a good law. The enactment of this law and many of its good features are the result of the untiring efforts of one of our

past presidents, John Paul Jones. Because the Health Department and the Association have shown themselves competent in other matters, the administration of this indigent care program was put in their hands. This next year and in the years to come our Committee on Indigent Medical Care will have a plenty of important and thought provoking work to do.

Our Legislative Committee is charged with the responsibility of monitoring the activity of our state legislative bodies and of the national legislative bodies in matters that pertain to public health and to public welfare. They are also charged with the responsibility of suggesting such legislation that might be in the interest of public health, public welfare and of our profession. This is a tremendous responsibility. It requires many hours of painstaking study of the various legislative acts. At times it calls for concerted action on the part of our profession to exercise its influence and leadership on the public at large in an effort to combat harmful legislation and in an effort to pass those acts that are good. We as doctors could hardly consider ourselves to be politicians; but as members of a profession for which the educational requirements are surpassed by none and a profession which when practiced brings its members in closer contact and a closer understanding of the public at large than any, I feel that it is our moral obligation to exercise the fruits of our training and experience in directing the affairs of our great country.

In May of this year we are calling a meeting of a planning committee consisting of all the committee members. The work of the Association will be outlined. It has been tremendously gratifying to see how the doctors have responded to calls for participation in the work on the committees. In the past it might be said that work of this Association was carried on by 10 or 15 men at the most. Today there are over 100 actively involved in its affairs.

Calvin J. Givhan



ORGANIZATION SECTION

Highlights Of The 1958 Annual Session



Dr. John A. Martin, President, opened the session on Thursday morning.

Mrs. B. B. Leavel, vice-president of the Montgomery County group; Mrs. Paul Craig, President, Woman's Auxiliary to the American Medical Association; Mrs. William Noble, President, and Mrs. H. Leon Rosen, President-Elect, Woman's Auxiliary to The Medical Association of the State of Alabama, at luncheon. Mrs. Rosen was elevated to the office of President during the annual meeting of the Alabama group which was held on Thursday and Friday.



Hon. W. A. Gayle, Mayor, City of Montgomery, welcomed the group.

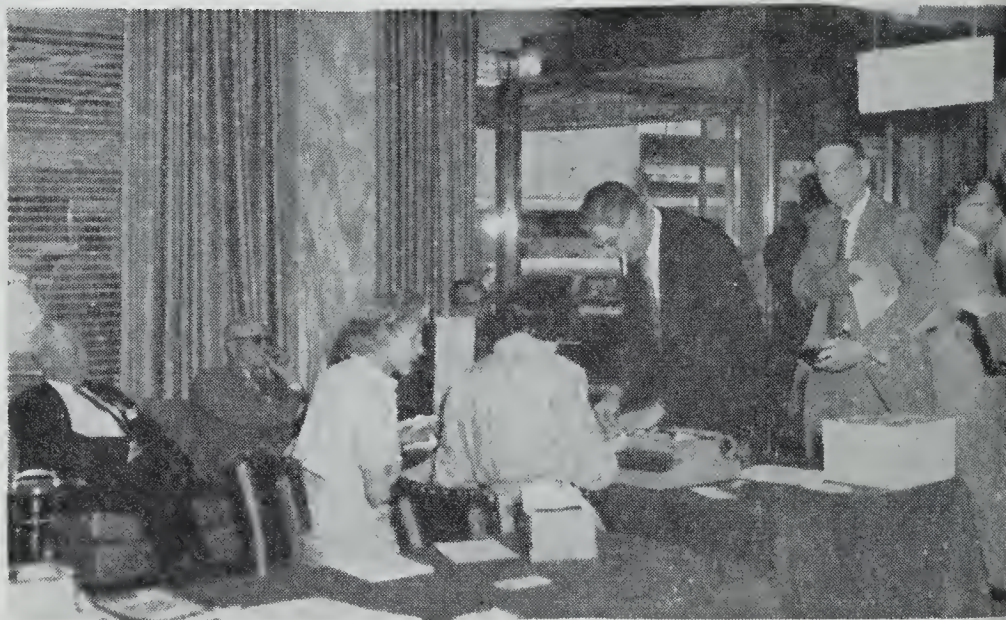


Counsellors and Delegates of the Association in business session, sitting as the Board of Health of the State of Alabama.



Dr. J. Michaelson, Foley, presented the William Crawford Gorgas Award to Sen. Lister Hill. The plaque held by Senator Hill was awarded for outstanding work in the field of health.

Registration was speeded up by pre-registration of counsellors and delegates—no waiting in line this year.



ORGANIZATION SECTION



↑
The Board of Censors at work.

1958-59 Officers of the Association: Dr. Douglas L. Cannon, Montgomery, Secretary-Treasurer; Dr. William R. Carter, Repton, President-Elect; and Dr. Edgar G. Givhan, Jr., Birmingham, President. Dr. Givhan accepted the gavel from Dr. Martin at the business session on Saturday.

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H. Edwards, McCalla; Shelby L. Burdeshaw, Headland; Stephen S. Busby, Hamilton; Rush P. Burke, Montgomery; Benjamin F. Anderson, Sellers; William R. Snow, Jasper. Drs. Frank J. Lee, Luverne, and Charles A. Donnelly, Birmingham, received their certificates with this group but were not present when the picture was made.

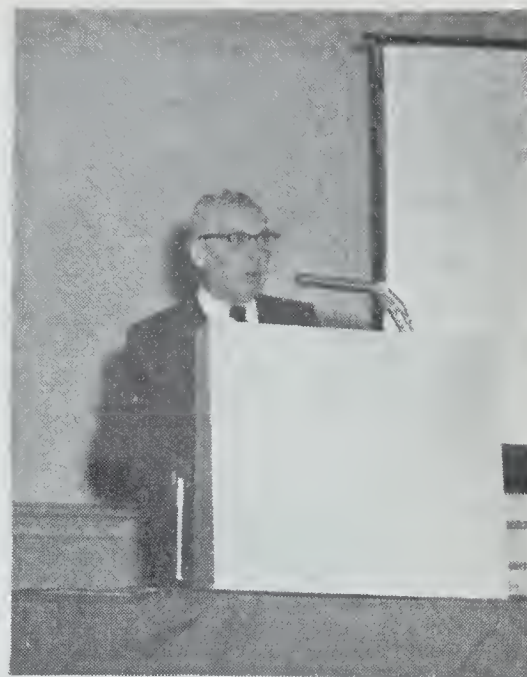
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Dr. R. C. Anderson, Assistant Commissioner, State of Ohio, Department of Mental Hygiene and Correction, Columbus, Ohio, delivered The Jerome Cochran Lecture at eleven o'clock on Friday.

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Mr. Joe P. Sanford, Executive Secretary, Kentucky State Medical Association, spoke at the Indoctrination Seminar. Dr. Haynes C. Byrne, moderator; Dr. J. O. Finney, another seminar speaker; and Dr. E. V. Caldwell, Chairman, State Board of Censors, are at Mr. Sanford's left.

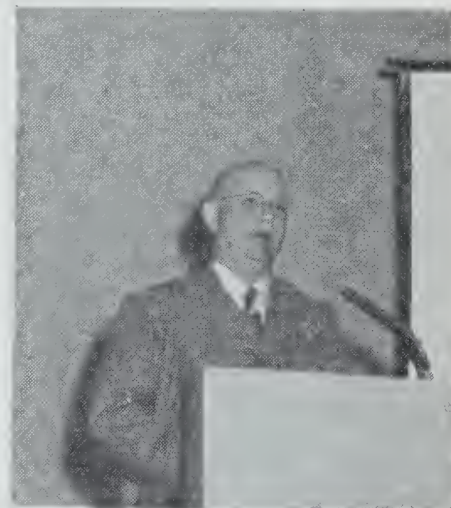
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Judge Walter B. Jones, Lawyer, Montgomery, addressed the group on Friday.

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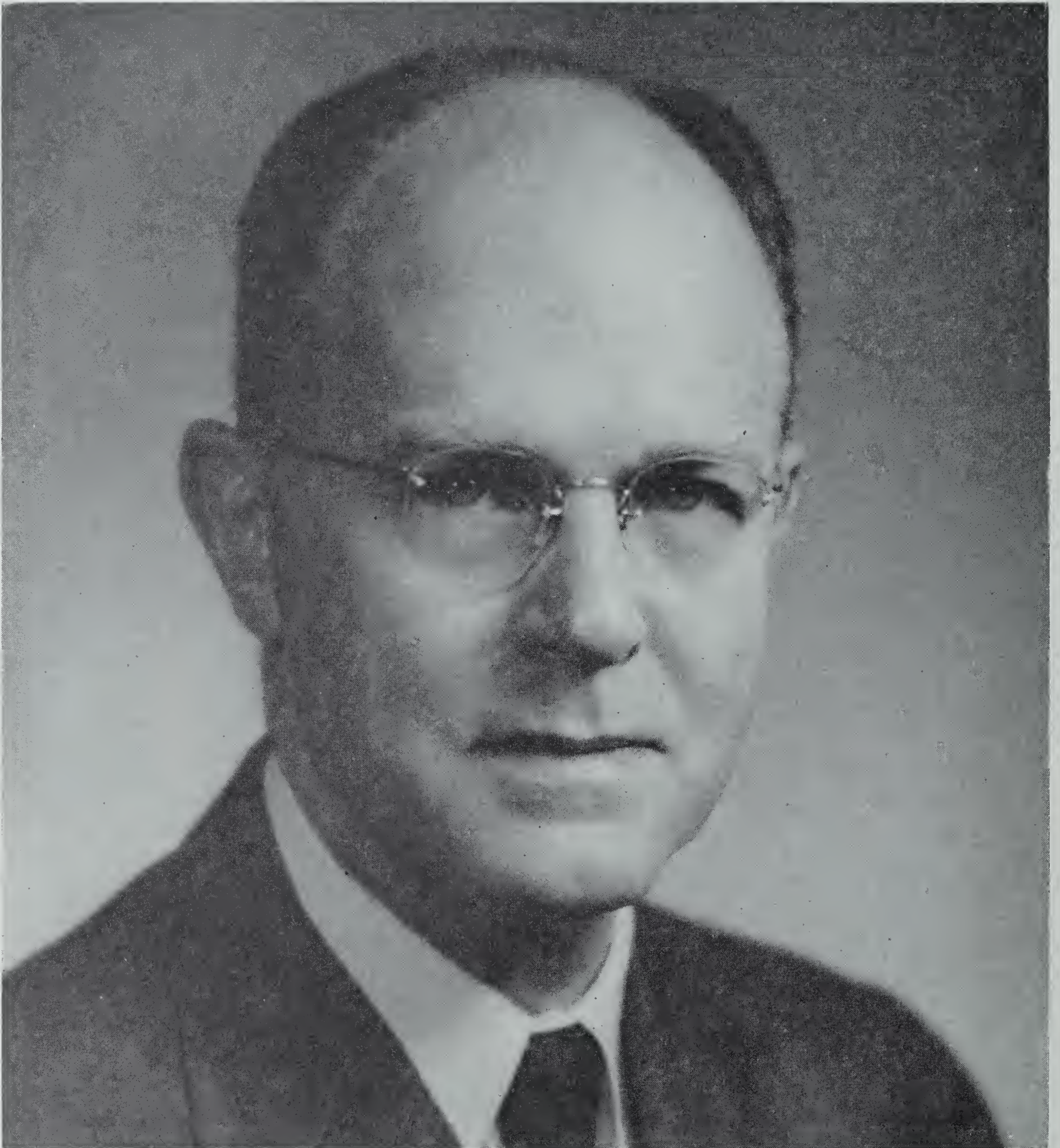
Eighteen members of the Fifty Year Club were present to receive their certificates of distinction. Pictured below are: Back row —Drs. John C. Hope, Sr., Mobile; George L. Johnson, Montgomery; Ross C. Speir, Birmingham; J. Ullman Reaves, Mobile; Charles M. Gross, Cullman; Murray C. Hollis, Winfield; Allen E. Orton, Bessemer; Clarence C. Wiley, Birmingham. Front row —Drs. Columbus A. Jackson, York; Benjamin F. Jackson, Sr., Montgomery; Jesse E.



ORGANIZATION SECTION

EDGAR G. GIVHAN, JR., M. D.

BIRMINGHAM



PRESIDENT OF THE ASSOCIATION

1958-1959

Dr. Givhan was born at Montevallo, Alabama, March 14, 1905. He attended Montevallo High School and received his B.A. degree at the University of Alabama. After earning his M.D. degree at Jefferson Medical College, he went to Vienna and then to Harvard Medical College for post-graduate study.

The President is a member of Southern Medical Association, past president of the Alabama Heart Association, Fellow of the American College of Physicians, past president, Jefferson County Med-

ical Society, and a member of the Trudeau Society. He also holds membership in the Newcomen Society and the Rotary Club.

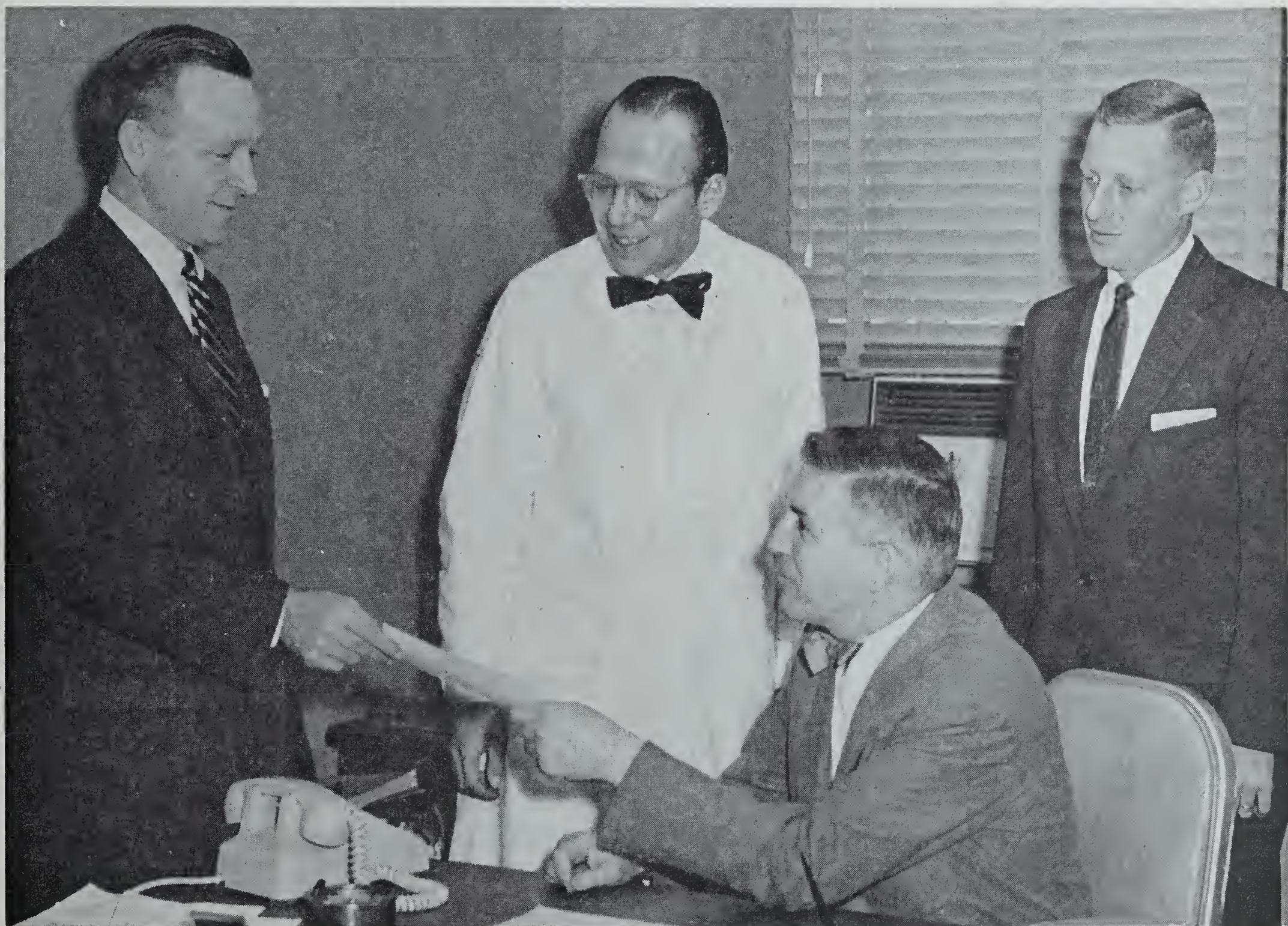
Dr. Givhan's appointments include Professor of Clinical Medicine, University of Alabama Medical College; Medical Director, Jefferson County Anti-Tuberculosis Association; and Medical Director, Protective Life Insurance Co.

Dr. and his wife Margaret Spencer Givhan are the parents of four lovely daughters.



MEDICAL CENTER NEWS

MUSCULAR DYSTROPHY ASSOCIATION PRESENTS GRANT TO DR. EMERSON



Shown presenting a check to Dr. Joseph F. Volkner and Dr. Jack Emerson of the Medical Center is Norman Woodall, President local chapter MDAA. Looking on is Henry T. Wingate, Executive Secretary of M. D. of State of Alabama.

A research project at the University of Alabama, Medical Center, is one of nine sharing in the most recent allocations made by Muscular Dystrophy Associations of America, Inc., for a total amount of \$79,508.

The MDAA grant, for \$7,506, gives renewed support to a basic muscle study directed by Dr. Jack D. Emerson, associate professor of physiology at the University of Alabama Medical Center.

A graduate of the University of Florida, 1945, Dr. Emerson received postgraduate training there and at Northwestern University Medical School, Chicago. He has been on the teaching staff of both these institutions and also taught, for a period, at the University of Miami, Coral Gables.

Dr. Emerson is studying the diameter and length of the fibers of a specific leg muscle in various mammals, including man. By analyzing size differences related to growth, sex and species, as well as pituitary disturbances, he is seeking to determine their normal range.

MDAA's broad program of grants-in-aid of research—now including about 100 projects in some 60 medical centers—is made possible by contributions raised chiefly in an annual campaign, the March for Muscular Dystrophy.

Citizens of Alabama contributed more than \$15,000 to the 1957 March. In the eight years since its founding, MDAA has allocated \$25,292 in support of research within the state. These figures are exclusive of the funds expended by MDAA Chapters for patients services. Three of the Association's 330 Chapter affiliates are located within the state.

RESEARCH AND TEACHING GRANTS IN DEPARTMENT OF
MEDICINE

Department of Medicine research and teaching grants continue to grow to the tune of \$295,000.

CARDIOVASCULAR SECTION

In the Cardiovascular Section of the Department of Medicine, Dr. Lloyd L. Hefner is working on a grant from the Alabama Heart Association in the amount of \$11,500. Collaborating with Dr. Hefner on this project are Drs. T. J. Reeves, H. Duke Thomas, and Tinsley R. Harrison. This grant was awarded to continue animal and human experiments to determine the correlation between movements of the surface of the heart and corresponding movements of the surface of the chest wall.

Dr. Arthur Yount has received a grant in the amount of \$11,000 from the Alabama Heart Association for establishment of a Work Classification Unit in conjunction with the Jefferson County Heart Council. The purpose of this Unit is to evaluate and eventually rehabilitate individuals

with heart disease, so that they may become productive citizens once again. This is a pilot experiment, and it is hoped that this Work Classification Unit will do much to help industry better understand the situation of individuals who have heart disease.

A teaching grant in the amount of \$25,000 is being used by Dr. Harrison for the teaching of students, residents and fellows in cardiovascular disease. This is an annual grant and has been available since Dr. Harrison has been in the Department of Medicine.

Dr. Harrison also has a graduate training grant in the amount of \$12,500 per annum which will be renewed for the next five years. This grant is used for the payment of salaries of three professional people and one secretary-technician.

A study on the movements and forces of the human circulatory system is being carried out by Dr. Harrison under a National Institutes of Health grant in the amount of \$22,732. This is also awarded yearly.

Dr. Keehn W. Berry, Jr., is conducting a study on the relationship of serotonin to abruptio placentae with an NIH grant in the amount of \$7,790. Collaborating with him in this effort is Dr. M. Leo Hughes, Jr., of the Department of Medicine.

Dr. Harrison has received \$10,000 from the Ingco Foundation to further his study in ballistocardiographic research.

HEMATOLOGY SECTION

In the Hematology Section of the Department of Medicine, a grant in the amount of \$93,790 was awarded Dr. Walter B. Frommeyer, Jr., beginning Dec. 1, 1956. Collaborators on this cancer chemotherapy grant from NIH are Drs. William H. Riser, Jr., William J. Hammack, and John Lusk. The purpose of this study is to compare the effects of a drug known to be effective in certain leukemias and solid tumors with new drugs which have shown promise in the experimental animal but which have not had clinical testing to date. Eight other medical centers in the southeastern United States are in this cooperative study, and already it has been established, statistically, that Leukeran (CB-1348) is the drug of choice in the treatment of chronic lymphatic leukemia.

INFECTIOUS DISEASES SECTION

Dr. Tom Fite Paine, Jr., is the principal investigator under a grant which became effective Sept. 1, 1957, in the amount of \$9,830 to study the effects of toxic agents on microbial metabolism and ecology. This grant was made from the U. S. Public Health Service, National Institute of Allergy and Infectious Diseases. Evidence has been obtained that the normally low incidence of monilia organ-

isms in the human microbial flora is a result mainly of the low oxidation-reduction potential induced by the usual bacteria in the body flora. As a result of researches in this area, a paper by Dr. Paine and his collaborators has been accepted for publication by the Journal of Antibiotics and Chemotherapy.

RHEUMATOLOGY SECTION

The National Institute of Arthritis and Metabolic Diseases of the NIH, on Dec. 1, 1956, awarded a three-year grant in the amount of \$43,032 to Dr. S. Richardson Hill, Jr., and Dr. Howard L. Holley as collaborator, for the qualitative and quantitative determination of the pattern of adrenal cortical secretion in patients with rheumatoid arthritis. It has been possible to show that the somewhat lowered total 24-hour output of 17-hydroxycorticosteroids in patients with active rheumatoid arthritis is due primarily to a decrease in excretion of this hormone during the early morning hours. It has also been determined in this study that the 17-ketosteroid excretion is perfectly normal in such patients. The results of this study were presented in preliminary form at the American Rheumatism Association Interim Meeting in Bethesda, Md., in December 1957, and further study in this regard is to be presented at the meeting of the Southern Society for Clinical Research in New Orleans this month. An important and significant outgrowth of this study is to develop technics and methods to quantitate aldosterone in the urine.

For studies on the urinary excretion of hormonal end products in patients with hyperplasia and benign or malignant tumors of the adrenal cortex, testes, and ovaries, a grant in the amount of \$7,500 for a two-year period was awarded Dr. Hill in 1956 by the Alabama Division of the American Cancer Society. The researches in this field by the group here have resulted in the ability to diagnose and prove pathologically hyperplastic adrenal glands with elevated glucocorticoid and androgenic hormone. In this study, methods are being investigated for estrogen assay and also for studying the effects of gonadotropins on the adrenal cortex and the production of corticoids as well as estrogens by the adrenal gland.

In the field of rheumatology, Dr. Holley has a five-year grant from the National Institutes of Health, this grant amounting to almost \$15,000 per year. Collaborators on this study are Dr. Pigman and Dr. Mary Grace Blair of the Department of Biochemistry. The studies involved in this research effort center primarily around the basic pathophysiology of rheumatoid arthritis. This group has received national recognition for the advances they have already made in this field. Coupled with this research grant is the arthritis teaching grant which was awarded by the NIH

to Dr. Holley as Director on July 1, 1957, continuing through June 30, 1958. This grant is in the amount of \$23,760 and is used for the teaching of medical students, advanced trainees, house staff, and physicians. Participating in this program under the direction of Dr. Holley are Drs. Robert Hogan and Stephen Stigler of the Department of Medicine, Drs. Thomas Hunt and Ben Moffett of the Department of Anatomy, Dr. Robert Mowry of the Department of Pathology, Dr. Pigman of the Department of Biochemistry, and Dr. John McMahon also of the Department of Medicine.

ENDOCRINE AND METABOLIC SECTION

Dr. Hill is also Program Director of the Diabetes Graduate Training Grant, which was awarded by the NIH, the National Institute of Arthritis and Metabolic Diseases, July 1, 1956, for a four-year period of time in the amount of \$75,166. Other training program members include Drs. Stanley Kahn, A. B. Riser, Bert H. Wiesel and Lewis S. Chase, all of the Department of Medicine. In this program, the trainee in metabolism, the students rotated through the Metabolic Service, the program members, and the program director, serve to instruct interns, residents and practicing physicians wherever feasible in the basic biochemical and physiologic background of diabetes mellitus with particular emphasis on the recent research developments. As an outgrowth of this, the Birmingham Metabolic and Diabetes Association has been founded and Dr. Hill has served as its initial president. In addition to the above parts of the program, instruction is carried out weekly by the physicians in this program for the trainees and students as well as house staff in the Diabetic Clinic of the University Hospital and Hillman Clinic. Through this grant, consultation rounds are made in the University Hospital and Birmingham Veterans Administration Hospital, as well as Crippled Children's Clinic and Hospital, when needed. At the present time there are more than 1,000 active patients in the Diabetic Clinic, this having been made possible by this training grant.

VA HOSPITAL RESEARCH ACTIVITIES

Through the Veterans Administration Hospital research funds, the Endocrinology and Metabolism Section of the Department of Medicine is conducting extensive studies in the Metabolic Laboratories at the Veterans Administration Hospital. These studies are concerned primarily with a chromatographic identification of the metabolic end products of adrenal cortical secretion and the quantitation of aldosterone. Other projects include studies on the functional relationship between the thyroid gland and adrenal cortex; studies on the effects of variations of blood glutathione levels on carbohydrate metabolism; a study of serum lipid pattern, and the effects of various hormones

on these patterns in patients with diabetes mellitus, thyroid dysfunction and familial hypercholesterolemia; a study of the response of the thyroid gland to stress and diurnal influences; the use of the sulfonylurea compounds in patients with diabetes mellitus; the electrophoretic and chemical identification of glycoprotein patterns in the serum and spinal fluid in patients with diabetes mellitus; electrophoretic identification of protein patterns in the spinal fluid and serum of patients with diabetes mellitus and its various complications and in patients with rheumatoid spondylitis and rheumatoid arthritis; the biologic and chemical assay for estrone, estriol and estradiol; use of adrenal cortical suppressing agents in patients with secondary hyperaldosteronism with particular reference to aldosterone suppression; and the metabolic and clinical effects of variations in ratios of one adrenal corticoid with another in patients with rheumatoid arthritis. In this regard, many people in the Departments of Medicine, Biochemistry and Pharmacology have participated in this research endeavor. Concerned directly with this research, in addition to Dr. Hill, are Drs. Howard L. Holley, Ward Pigman, William Hammack, Sidney Chenault, Mr. Willard Starnes and others.

DRUG STUDY PROJECTS

Nov. 1, 1957, Dr. Margaret S. Klapper received a grant in the amount of \$2,640 from the Ciba Pharmaceutical Company of Summit, N. J., for evaluation of certain hypotensive drugs. Dr. Leo S. Richard is the collaborator on this grant. Another grant in the amount of \$3,450 was awarded Dr. Klapper to run from May 1, 1957 through Aug. 1, 1958 for evaluation of certain hypotensive drugs, this grant being made by the Irwin, Neisler Company, Decatur, Ill. At present the results of the use of these drugs are not conclusive. Dr. G. Hampton Smith of the Department of Medicine is a collaborator in this study with Dr. Klapper. A recent grant from Ciba Pharmaceutical Company to Dr. Klapper in the amount of \$3,450 was awarded in November 1957 for the investigation of new analgesic drugs, these drugs being used primarily in the tumor clinic. Dr. Holley is the collaborator on this study. Since this study has only recently been started, progress reports cannot be made.

CANCER GRANT

A cancer teaching grant, which is a five-year grant amounting to some \$25,000 annually, is under the direction of Dr. Holley, who is Director of the Tumor Clinic of the University Hospital. Many full-time and voluntary faculty members of essentially all of the departments of the Medical School aid in this cancer teaching program.

Thus the Department of Medicine continues its

research and educational activities on a very broad and promising front.

DR. NORMAN L. LAWRENCE JOINS MICROBIOLOGY STAFF



Dr. Norman L. Lawrence is a recent addition to the Department of Microbiology as Assistant Professor of Microbiology. He comes to Birmingham from Geneva, New York, where he did research on the biochemistry of spore germination at the New York State Agricultural Experiment Station.

Dr. Lawrence received his Bachelor's Degree in Chemical Engineering from the University of Minnesota in 1944 and his Master's Degree from the University of Minnesota in 1950. He obtained his Ph.D. in the Department of Bacteriology at the University of Illinois in 1953 working under Dr. H. O. Halvorson.

From a research standpoint, Dr. Lawrence is particularly interested in the physiological changes involved in the germination of bacterial spores and related problems.

HEART DIAGNOSTIC CENTER TO BE ESTABLISHED HERE

One of the most modern heart and blood vessel diagnostic and treatment centers in the nation is being installed on the 7th floor of the Hillman Building.

This completely air conditioned cardiovascular suite will be the second of its kind in the nation.

The very latest in diagnostic equipment, instrumentation room, operating room and laboratory will be included in the new installation. In addition, there will be locker rooms for doctors and nurses.

The facility will have the dramatic addition of a closed circuit television system with a two-way intercommunication system so that the attending physician may speak to the surgeon, and so that medical students watching an operation on monitor sets may ask and receive answers to their questions.

Featured in the new installation will be a high speed x-ray machine capable of making 12 pictures per second of the beating heart. Instruments will convert the heartbeat into visible lines on a scope, and others will make pictures of this record. A research recorder with 18 leads will record the patients' data.

A viewing room for the study of x-ray and photographic records will be on the eighth floor of the Hillman Building.

CONTRIBUTION BY LADY MANAGERS

Descendants of the Board of Lady Managers of the original Hillman Hospital recently presented a donation of \$1200.01 to University Hospital and Hillman Clinic. The money is to be used toward equipping an examination and treatment room for indigent patients. The check was presented March 4th to Matthew F. McNulty, Jr., Administrator, by Miss Ella Lee Smith.

The donation of \$1,200 (and a symbolic \$.01 for growth) represented the final amount of money in the treasury of the Board of Lady Managers. Composed of public spirited ladies, this board was organized in the summer of 1888 for the operation of a hospital. The first hospital was known as the Hospital of the United Charities and has since evolved into the University Hospital and Hillman Clinic, which is the largest hospital in the state.

HEARING AND SPEECH CLINIC

Dr. Robert Roach, Assistant Professor of Audiology in the Department of Otolaryngology, attended the February 25th luncheon of the Women's Civic Club where a check for \$335.00 was presented to him by Mrs. L. J. Guilian, First Vice-President.

The money is to be used to purchase an auditory training unit which will enable the clinic to extend its training to children and adults with impaired hearing.

The funds were part of the money raised by the Women's Civic Club at its recent card party.

MISS BRETSCHNEIDER APPOINTED CHIEF TECHNOLOGIST

Miss Ann Bretschneider has been appointed Chief Technologist in the Surgical Pathology Laboratory of the University Hospital, effective February 21.

Miss Bretschneider is a native of Boston, Mass., where she was a student histopathology technician at the New England Deaconess Hospital from 1952-57.

In 1955 she became a Registered Histological Technician (A.S.C.P.).

She received her B.S. degree from Northeastern University in Boston in 1957, and did graduate work in cytology at George Washington University in Washington, D. C. She is a member of the American Society of Medical Technologists and the American Association for the Advancement of Science.

Before coming to the University of Alabama Medical Center, Miss Bretschneider was a research technician in the Division of Neurological Diseases and Blindness at the National Institute of Health in Bethesda, Maryland.

DR. FRANCIS ELECTED

Dr. Robert D. Francis, Associate Professor of the Microbiology Department, has been elected Vice-President of the Southeastern Section of the Society of American Bacteriologists.

MRS. SUSIE MCCUTCHEON APPOINTED NURSING INSTRUCTOR

Mrs. Susie McCutcheon has been appointed Instructor in Public Health Nursing in the University Hospital School of Nursing.

A native of Russellville, Mrs. McCutcheon became a Registered Nurse and received her Bachelor of Science Degree in Nursing from Vanderbilt University in 1956.

Meeting On Labeling of Chemicals—As part of an over-all program to prevent poisonings and to increase public awareness of the hazards of certain chemical products, the AMA's Committee on Toxicology has drafted a broad model law requiring precautionary labeling of hazardous substances in commercial, household and industrial chemicals. The bill is intended as a model for uniform laws to require the declaration of hazardous ingredients and warning statements on the label and in the accompanying literature of chemical products.

The first of two or more conferences with representatives of health departments, regulatory agencies, medical societies and allied health organizations to discuss this and other tentative legislation was held May 9 at AMA headquarters, Chicago. The Conferences on Labeling Hazardous Substances will focus attention on the nature of the general problem as seen by the public, the medical profession, regulatory officials and trade associations, and also will provide discussion on both local and federal labeling laws.



ASSOCIATION FORUM

COMPREHENSIVE INSURANCE FOR PHYSICIANS' SERVICES AS REPORTED BY HEALTH INFORMATION FOUNDATION

George Bugbee, President, Health Information Foundation, states that there is ample evidence that the American public is interested in having voluntary health insurance cover a broader range of medical expenses than does prevalent insurance, which is designed to cover hospital expenses and physicians' fees for care in the hospital.

Many sizable medical expenses occur outside the hospital. For example, about one-fifth of the consumer's over-all medical dollar goes for care provided by doctors in home and office. It is feasible for insurance to cover such expenses, since they are not evenly distributed among families and, in fact, represent a significant part of the high medical costs periodically experienced by some families.

Physicians, hospital administrators, and voluntary health insurance agencies are all working toward covering a greater range of personal medical costs. But most existing plans for comprehensive health insurance in this country alter the traditional framework of medical practice, and thus have not gained wide acceptance by physicians or the public.

In Canada, a number of province-wide, physician-sponsored prepayment plans cover comprehensive physicians' services. The Windsor Medical Service, for example, has for 20 years provided insurance against physicians' fees for home, office, and hospital care; and this program, operated by the local medical profession, has enrolled most of the population through voluntary decision by the public.

The details of the Windsor program, summarized in this article, warrant study by all concerned with the orderly growth of voluntary health insurance in the United States.

The Health Information Foundation report on the Windsor plan begins with the statement, "Comprehensive physicians' services can be provided satisfactorily under a voluntary health insurance plan sponsored by a medical society and run on a fee-for-service basis."

This is the general conclusion derived from an extensive study of one such plan, Windsor Medical Services, Inc., of Windsor, Ontario (Canada). The study was made by the Bureau of Public Health Economics, School of Public Health, University of Michigan, under a grant from Health Information Foundation.

Data covering the experience of 1954 were obtained by interviews during 1955 with an area-probability sample of the Windsor population and with virtually all Windsor physicians. In addition, an audit of the plan's administration was made.

Less than 5 per cent of the American population subscribes to plans that provide comprehensive physicians' benefits. Most of these plans are not sponsored by the organized medical profession, and most of them alter traditional aspects of medical practice. Windsor Medical Services has been operating successfully for 20 years. Like the typical American physicians' service plan, it is sponsored by the medical society, offers free choice of physician to subscriber, makes fee-for-service payments to physicians, and offers group enrollment of subscribers and coverage of their dependents.

Windsor itself is an urban, industrial community with a population in the study year of about 160,000 in its metropolitan area. In its population makeup and ecologic and economic characteristics, it resembles the nearby city of Flint, Michigan, and other medium-sized industrial communities in the United States.

The Windsor plan emerged from the experience of the local Essex County Medical Society in operating a medical relief program for the Ontario government in the mid-1930s. Planned in 1936 and formally chartered in 1937, Windsor Medical Services obtained its first group of subscribers in July 1939.

Coverage and Premiums

In this initial contract the plan agreed to cover all medical and surgical services, x-ray and special services, consultations, services of anesthetists and assistants at operations, preventive medical examinations and refractions, and confinements (includ-

ing prenatal and postnatal care), in the office, home, or hospital. Excluded was care for such conditions as tuberculosis, mental illness, drug addiction, and acute venereal diseases. A waiting period of six months was specified for treatment of any preexisting condition.

The services in the present group contract are more liberal. Radium and deep x-ray treatment are now mentioned specifically among the services offered, as are preventive inoculations and cystoscopic and bronchoscopic examinations. Exclusions, similarly, are explained more fully. Waiting periods have been specified for confinements (10 months), refractions and preventive medical examinations (12 months), and for the removal of tonsils and/or adenoids, herniorrhaphy, and reparative pelvic, vaginal or perineal surgery (6 months).

Since 1939 WMS has revised the premiums for its comprehensive group plan five times. In the original contract the monthly premium was \$1.09 for the subscriber and for each dependent. The present monthly premium, adopted in February 1956, is \$2.30 for a single subscriber, \$4.90 for husband and wife, \$6.50 for husband, wife and child, and \$7.90 for husband, wife, and two or more children. (In addition, most WMS subscribers carry hospitalization insurance with Ontario Blue Cross.)

Organization

Briefly, the organization of WMS is this: Member-physicians of the corporation elect a governing board of directors, which at present consists of seven physicians and three laymen. Day-to-day operation of the plan is directed by a lay administrator, who supervises a staff of 80, and by a medical director.

Payments to practicing physicians are based on a fee schedule—that is, charges the member-physicians have agreed to make for services to which subscribers are entitled. (Well over 90 per cent of all 211 Windsor doctors are medical members of WMS). The cost of administration has remained below 8 per cent of income during the past decade.

Utilization

More Windsor Medical Services subscribers (68 per cent) used physicians' services during the study year than did subscribers to other plans (58 per cent) or those without medical care insurance (51 per cent). But the fact that 32 per cent of WMS subscribers did not visit a doctor during the year, despite the absence of any financial barrier, indicates that use of medical services is by no means certain once cost factors are removed.

The distribution of services in the population appeared to be stable over time; many people received only a few services and a few received many. As a result, the use of comprehensive serv-

ices can be predicted statistically, so that insurance principles are applicable.

Effects on Physician-Patient Relationship

The doctor-patient relationship can affect both the quality and the cost of medical care. If the removal of cost barriers were to encourage patients to change physicians often or to visit a variety of specialists without professional referral, the stability of the patient-physician relationship could be damaged.

WMS subscribers follow the same general pattern as do non-subscribers in their use of medical services. In addition, 92 per cent of WMS subscribers have a physician whom they consider their "regular doctor," while the corresponding proportions for subscribers to other plans and the uninsured are 85 to 76 per cent, respectively.

The plan appears to have no adverse effect on the patient's satisfaction with the physician chosen.

Since WMS includes home calls as subscriber benefits, it might be thought that subscribers would tend to over-utilize and thus abuse this benefit. Windsor subscribers obtain about 12 per cent of their physicians' services in their homes. Subscribers to other plans and the uninsured obtain 15 per cent of their services in house calls.

Public's Evaluation of WMS

As the Windsor study notes, people's evaluation of comprehensive physicians' care insurance helps answer the question of their willingness to pay for these benefits. It also indicates the intensity and direction of public opinion about health insurance.

Some kind of insurance for physicians' services is considered important by the majority of each group in Windsor.

While 84 per cent of WMS subscribers termed themselves "highly satisfied" or "generally satisfied" with their plan, only about half of the subscribers to other plans felt this way about their coverage. In addition, over half of the uninsured group expressed interest in joining some plan that would cover doctors' bills.

The three subscriber-status groups were asked if physicians' insurance should, in their opinion, continue to be handled privately or made the responsibility of the government. Among WMS subscribers, 24 per cent favored government control, while 60 per cent preferred the present method of control. Among subscribers to limited plans, 34 per cent favored government control and 52 per cent private control. Of the uninsured, 43 per cent favored government control and 31 per cent preferred private means. The study conclusion: "WMS has the clear effect of reducing pressure for government intervention."

Effects of WMS on Medical Practice

For physicians in full-time practice, WMS subscribers constituted, on the average, about two-thirds of their total patient load and 60 per cent of their total income during the study year. This proportion of patients is fairly evenly distributed among Windsor physicians. Eighty per cent of them had at least 50 per cent WMS subscribers among their patients.

The frequent complaints about patients—that they wait too long before coming for care, “shop around” from doctor to doctor, demand unnecessary services or treatment, do not follow advice, etc.—are not considered large problems by most Windsor physicians. No more than 20 per cent of Windsor physicians find any one of these very important.

However, physicians with larger proportions of WMS subscribers as patients tend more often to consider “shopping around” and unnecessary house calls large problems; on the other hand, fewer are troubled by patients who wait too long before coming for care or disregard advice.

About 63 per cent of Windsor physicians reported an increase in the proportion of their income derived from WMS over the few years prior to the study year. Of these, 40 per cent were “very satisfied” with this increased dependence on the plan; 42 per cent were “fairly satisfied”; 15 per cent were “somewhat dissatisfied”; and 2 per cent were “very dissatisfied.”

Two principal reasons were given for the attitudes expressed. Those who were satisfied cited the steady, increased income that WMS had brought them. Those who were critical of the plan (including some who regarded themselves generally as satisfied) focused on the plan’s fee schedule as “too low” or “too fixed.”

Most physicians stated that WMS aided them in building and stabilizing their practices and enabling them to provide care without cost considerations, but not in regularizing their working hours. The effect of WMS on the quality of medical care was judged to be favorable by almost one-half the physicians and unfavorable by 15 per cent. Similarly, the stabilizing influence of WMS on physician-patient relationships was regarded as helpful by 40 per cent and not so by 15 per cent.

Windsor physicians were almost unanimous in saying that WMS was doing a “very good job” in making medical care available to the public. About two-thirds agreed that WMS had also been generally in the best interests of physicians (another 29 per cent felt that in some ways it had but in other ways it had not.)

Of the physicians who are medical members of WMS, about two-thirds believe the doctors have an adequate voice in determining plan policy and

that plan actions “usually agree” with their own point of view. Relative to the fee schedule itself, 27 per cent are satisfied, 55 per cent believe it requires “some change”; another 16 per cent believe that major revision is needed. In general, there was less criticism of the procedures for revising fees. Most physicians are satisfied with the “taxing” procedures (by which physicians’ claims are reviewed and adjusted, if excessive) and with the other aspects of their relation to the plan.

When asked their feeling about many different types of possible insurance benefits, Windsor physicians generally agreed: They favor comprehensive benefits for home, office, and hospital services, covering all costs except drug and appliances, with the patient paying for the first visit or so and the physician being paid directly by the plan on a fee-for-service basis. With the exception of the suggested deductible feature, as an assumed control on “over-utilization,” this payment-benefit pattern agrees with that applied by WMS. It is of interest, however, that without any deductible features WMS subscribers utilized one or two calls in no greater proportion than did those outside of WMS.

Cost of Processing Claims

About 96 per cent of the physicians reported themselves as satisfied with the paperwork required of them. The only routine paperwork is the preparation of a monthly “claim card” for each WMS subscriber who visited the physician during the month. The card identifies the subscriber by name, address, and subscriber and group number; specifies the dates, number and types of services rendered; and gives the fee for each service and the physician’s diagnosis. The doctor may prepare duplicate cards for his own records, but the plan sends him a monthly statement listing his reported patients, his submitted fees for each patient, and fees allowed by the plan.

About 95 per cent of the claim cards received by the plan are processed routinely. The remaining 5 per cent require some consideration by the medical director or by a medical control committee. As a result of this review, an average reduction is made of about 3 per cent of the total claims submitted by participating physicians.

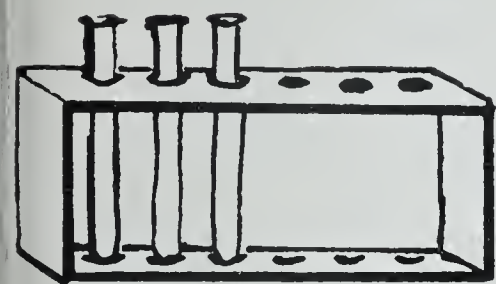
In the sample month selected for analyzing costs, 47,750 claim cards were submitted, covering 71,998 services (1.51 services per claim card). Payments to physicians for the month were \$290,267.30—\$6.08 per claim card or \$4.03 per service.

The cost of processing all claims received for the month, determined by allocating personnel time and other expenditures, was calculated to be \$6,743.33. This amounted to 14 cents per claim card or 9 cents per service. Since the average claim is \$6.08, the cost of processing amounts to 2.3 per

cent of the claim amount—far less than commonly believed.

The Health Information Foundation report states that, taken as a whole, this study of Windsor Medi-

cal Services indicates that comprehensive physicians' service insurance on a fee-for-service basis is feasible from the standpoint of doctor, patient, and pre-payment plan alike.



STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.

State Health Officer

PIONEERING IN PUBLIC HEALTH

E. G. McGavran, M. D., M. P. H., D. Sc.

Chapel Hill, N. C.

It is altogether fitting and proper on this occasion of the Dowling Memorial Lecture that we should talk about pioneering in public health. We are honoring the memory of a man who was pre-eminently a public health pioneer. We are a country of pioneers and, even today, with our land frontiers pushed back, we reverence the pioneering spirit in every field of endeavor.

What is this pioneering spirit exemplified by Dr. Dowling? What are the attributes of a pioneer? From our comfort and ease, from our security and complacency harvested from the pioneers of the past, we speak and think glibly of pioneering spirit. It is a spirit that sees ahead in the future a far brighter world, and one for which it is prepared to make real sacrifice. The key to pioneering is this faith and willingness to make real sacrifices here and now, because sacrifice is necessary. The course of the pioneer is never easy, never popular, seldom understood or appreciated concurrently. Dr. Dowling experienced all these things and many more. He was vilified, ridiculed and even flogged for challenging the traditional way of life of his community, for initiating new approaches to the health problems of his community, for advocating change in accepted programs, patterns and activities in public health—all because he had the vision of a far better and brighter world and a willingness to sacrifice his security, his comfort and his personal welfare to make this world come true.

Today, in public health, we too are at the threshold of a new era, a bright, new and better world with unexcelled opportunities for human good and

happiness. The science of community health is just emerging. We are on the ground floor—in virgin territory—for the development of new and better tools and techniques, indices and criteria for scientific diagnosis of community health needs. We are only beginning to understand and systematize our skills in community organization. We are only beginning to use and exploit the strength of democratic public health teams of professional equals. We are only beginning to understand the tremendous contribution of the social and behavioral sciences to public health as an integral part of public health.

But are we prepared to make the sacrifice here and now to make the new bright world come true? Do we have the pioneering spirit? Do we have the public health leadership? No one can answer for us. We must give the answer ourselves.

The affirmative answer is not easy because there will be no looking back or turning back. We are proud of our progress in public health—progress in our public health programs, in our health departments, our conquests of diseases, our professional status. But this very pride, this looking back, may be our downfall. Perhaps we should contemplate the Holy Writ and the story of Lot's wife. Here was a woman who had much to be proud of, but she looked back and was turned into a pillar of salt. She went no farther. Looking forward, for Lot's wife, was not easy or pleasant. It was a rough road ahead, with unhappiness and danger, with heartbreak and uncertainty, a break with tradition, the usual pursuits, activities and programs. I have great sympathy for Lot's wife. She did just what you and I would do and are doing, actually, steadily and continuously in public health—looking back. The affirmative answer is not easy, because it means pioneering—real pioneering—with visions and willingness to make real sacrifices here and now.

Let us consider some examples.

We record with pride the falling death rate from tuberculosis, the hospital beds now available without waiting lists, the increasing percentage of early diagnosis in the minimal stages of the clinical

The Dowling Memorial Lecture delivered before the Alabama Public Health Association, Birmingham, March 13, 1958. The author is Dean of the School of Public Health, University of North Carolina.

disease, the mass x-ray screening accomplished, the clinics held, the visits to tuberculosis patients. Yet, in evaluating our success in tuberculosis control, in the epidemiologic analyses of communities with and without these public health, medical, and hospital services, we are beginning to wonder what, if anything, all these activities have had to do with the reduced rates of tuberculosis. We are beginning to realize, if we look ahead, that our approach and concept of tuberculosis control have been based upon the false premise of early case finding, that real control or eradication of tuberculosis can be based only upon community knowledge of the infection of tuberculosis and not upon the clinical case with tuberculosis, that the tuberculin positive reactors are more our responsibility and concern than is early case finding, that the positive reactors to tuberculin are in effect the carriers causing 90 per cent of clinical cases of tuberculosis today, and that the clinical cases of tuberculosis at best are only 10 per cent of the source of new cases. If we look ahead we realize that our tuberculosis control program must be completely revised and changed—that we must determine the total number of positive reactors to tuberculosis in our community, the 90 per cent source of new clinical tuberculosis today and tomorrow. We must then develop means of preventing those with positive tuberculosis reactions from breaking down or infecting others, because some of them have positive sputum at least at intervals without ever developing clinically diagnosed disease. Evidence is growing to assure us that with proper treatment with the new drugs these positive tuberculin reactors can become negative and become non-infectious. But we have not been concerned with these people, a sizable segment of our population, the 90 per cent source of new tuberculosis. We have limited our interest and activity to clinical cases of tuberculosis, at best 10 per cent of the source of new cases.

But this look ahead is not easy. It is much more comfortable to look back to traditional patterns of tuberculosis control (even though we intelligently, statistically, and epidemiologically question if they ever controlled anything), to look back on our mass screening program, mobile x-ray units, tuberculosis clinics, nursing home visits, hospitalization programs. These are so comfortable, so acceptable, so well thought of by appropriating bodies. The flesh pots of security! Who dares to challenge our way of life in traditional tuberculosis control programs? Who dares to look forward, let alone go forward, without looking back? Who dares to pioneer?

Let's take an easier example, our dental public health program. Here we have established traditional popular programs. We examine children's teeth in schools—a captive population—despite the

fact that we know today that this is far too old a population to do much good in preventive dentistry. So we examine them. In poor health departments the nurse or doctor does this examination—a worthless procedure, but we go through the form. In good health departments a practicing dentist or a visiting state dentist makes the examination. If we are really good, we get D.M.F. rates and records. We even do bite-wing x-rays and devise ways of getting in preschoolers at earlier and earlier ages where preventive dental work really counts. Then we get, provide, or encourage correction of defects, for example, filling teeth or extracting teeth, by various programs which we call public health dental programs. Along this route we throw in a lot of health education activity—pamphlets, shows, movies on how to brush teeth, when and why, what to eat and not to eat if you want good teeth and good dental health. All of this activity and work is directed, as in tuberculosis control, at early case finding and treatment of dental decay. This does a lot of good for many individuals in preventing unnecessary tooth loss, pain and suffering. But what has been the net community result of all this activity, or lack of it? Has dental caries been reduced? Are our dental decay rates falling?

I am reminded of a recent visit to Finland. I was visiting a public health student whose health jurisdiction was some remote islands in the Baltic Sea with a few thousand population. His wife was a dentist. It was the first time these people had had a resident dentist. This is what she told me. "Since coming here five years ago, I have been particularly interested and concerned in children's dentistry—preventive dentistry—and a large part of my practice has therefore been directed at early detection and care of dental caries. I work hard, but there is more dental caries now in children than when I started five years ago. I'm losing ground even in the small, static population of these islands."

Unfortunately, this experience is not the exception, but the rule, in Finland and in the United States. Nothing has happened community-wise. If anything, we have more dental caries than ever before. Our dentists are busier than ever before. Pioneering obviously requires that we do something else besides early case finding and treatment. Fluoridation of city water supplies is possible and would cut down dental caries for oncoming generations by a sizable per cent. But not all our cities have fluoridation of their water supply, and if they did, what do we have to offer rural populations with no access to municipal water supplies? Some health departments don't want to take leadership in getting fluoridation. They don't oppose it. No sensible person could, but to champion the cause might be unpopular. You can make enemies

n high places. It is dangerous to push it too fast. So we continue our traditional public health dental program, going back and looking back, turning our backs on pioneering.

Let's take a real hard example, our mental health program. Here some of our most modern and up-to-date health departments have established child guidance clinics, or parent guidance or family guidance clinics, to take care of problem children, problem parents or problem teachers. The purpose is noble, early diagnosis and treatment of mental problems or illness. And the rate of mental illness continues to climb and climb and climb, just as if we had done nothing at all. No one wants to face the music. We can get millions appropriated for more mental hospitals, more hospital beds, better psychiatric care for the mentally ill, out-patient clinics, and now, with the new drugs and tranquilizers, more home care and cures. But still mental instability and illness increases and increases.

The problem is quite clear. Control—real control—has never come in any disease, and it won't in mental disease through programs aimed at early diagnosis and treatment of mental disease cases. We must devise community approaches to the problem—public health approaches. We must change the environment that is producing the disease, not by purification of water supplies as in typhoid but by some mechanism no more difficult for us to discover and institute today than was purification of water supplies 100 years ago before the typhoid bacillus was even known. Perchance we might change our child labor laws to provide experience in the dignity of honest work for children—labor instead of recreation; hard work, one of the best mental and emotional stabilizers—which we have removed by law from the normal environment of the child. Or, we must devise means of immunization against mental disease. We know a lot more about that than they knew about typhoid immunization 100 years ago too. *Controlled exposure* to the stresses and strains of life and reality could be instituted at an early age. In the last world war the success of such controlled exposure to live fire reduced battle psychoses tremendously. Do we dare to look ahead—or go ahead? Or are we satisfied with traditional child guidance clinics, et cetera?

Though there are many others, shall we consider one final example—our program for control of communicable diseases through sanitary science? Here we can surely point with pride at real control programs that have eradicated some of our most serious killers and almost eradicated many others. The backward look is more justified here, but is equally dangerous. There is the danger of success, more hazardous to the forward look and pioneering than is failure, because it breeds

complacency with what we do or have done. Today we are aware that the communicable diseases are not our chief community health problems or chief killers. We know that fringe area development, housing, communication, transportation, industrialization are among the greatest health hazards of the present and future. How much time do sanitary scientists spend in facing the real community health problems of today—in pioneering in accident control, industrial hygiene, housing, air pollution, irradiation hazards? The traditional backward look is so much easier, so much more secure, is expected, required and demanded by the public. Real sacrifice here and now is hard to make.

We have no solutions. We have no blueprint, no hard top roads to follow. Pioneers never do. But we need pioneers. We need research. We need courageous public health workers who are prepared here and now to make sacrifices for the conquest of the diseases of today and tomorrow.

Public health pioneering requires the same vision today that it did for Dr. Dowling and all the other great public health pioneers, and this vision holds the greatest promise of this century for a bright new and better world ahead. We do not advocate that we discard all traditional activities; but we do insist that we should question and evaluate every one of them, that we should exert leadership and develop the pioneering spirit in public health, not in our spare time or overtime, but continuously, seriously and with sacrifice—that we recognize that early diagnosis and treatment of disease are false premises in our control objectives, a false god that we have been worshipping too exclusively—that we keep in mind the true goal, the control or eradication of disease, that we place chronic diseases in their true perspective among community health needs and programs, that we fearlessly pioneer, follow the grail—at whatever cost and risk—and emulate “the youth who bore mid snow and ice a banner with a strange device—‘Excelsior.’”

The total value of the buildings, equipment, and other assets of hospitals in this country is now \$13 billion, Health Information Foundation reports. This is the equivalent of \$8,100 per hospital bed, \$590 per hospital admission, or \$78 per person in the United States.

Although hospitals belonging to nonprofit organizations have only one-fourth of the nation's hospital beds, they own almost half the total hospital assets in this country. Such hospitals rank high in provision of special facilities and services.

Three-fourths of all hospital assets—nearly \$10 billion—are invested in institutions providing general care or specialized services other than psychiatric or tuberculosis. Psychiatric hospitals, which provide nearly half of all the beds in this country, own only about 20 per cent of the total hospital assets.

Of more than \$500 million spent on private hospital construction in the U. S. last year, an estimated three-fifths came in the form of voluntary contributions.

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director

SPECIMENS EXAMINED

February 1958

Examinations for diphtheria bacilli and Vincent's	95
Agglutination tests.....	452
Typhoid cultures (blood, feces and urine).....	468
Brucella cultures.....	7
Examinations for malaria.....	27
Examinations for intestinal parasites.....	2,220
Darkfield examinations.....	5
Serologic tests for syphilis (blood and spinal fluid).....	24,682
Examinations for gonococci	1,353
Examinations for tubercle bacilli.....	3,510
Examinations for Negri bodies (smears and animal inoculations).....	210
Water examinations.....	1,722
Milk and dairy products examinations.....	3,815
Miscellaneous examinations.....	1,172
Total	39,738

* * *

BUREAU OF PREVENTABLE DISEASES

W. H. Y. SMITH, M. D., Director

CURRENT MORBIDITY STATISTICS

1958

	Jan.	Feb.	E.E.* Feb.
Typhoid and paratyphoid	1	4	1
Undulant fever.....	0	0	1
Meningitis	12	14	17
Scarlet fever.....	461	808	60
Whooping cough.....	7	21	44
Diphtheria	5	0	13
Tetanus	0	1	1
Tuberculosis	115	142	189
Tularemia	1	1	2
Amebic dysentery.....	1	2	2
Malaria	0	0	0
Influenza	2,125	4,845	1,463
Smallpox	0	0	0
Measles	154	422	506
Poliomyelitis	0	3	4
Encephalitis	0	0	0
Chickenpox	174	442	350
Typhus fever.....	0	0	1
Mumps	174	219	194
Cancer	550	1,026	371
Pellagra	0	0	1
Pneumonia	262	382	352
Syphilis	98	92	195
Chancroid	4	3	5
Gonorrhea	323	244	326
Rabies—Human cases	0	0	0
Positive animal heads.....	11	9	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATISTICS
FOR 1957 AND COMPARISONS

Live Births, Fetal Deaths, Infant Deaths, and Deaths by Cause	Number Recorded			RATES*		
	1957 Provisional	1956 Final	1951-1955 Average	1957 Provisional	1956 Final	1951-1955 Average
Live births	83025	83758	82506	26.1	26.5	26.0
Deaths	28122	27080	26705	8.8	8.6	8.4
Fetal deaths	1759	1802	1979	20.7	21.1	23.4
Infant deaths						
under one month.....	1854	1757	1953	22.3	21.0	23.5
under one year.....	2666	2609	2969	32.1	31.1	36.0
Cause of Death						
Tuberculosis, 001-019	309	330	517	9.7	10.4	16.3
Syphilis, 020-029	69	61	104	2.2	1.9	3.3
Dysentery, 045-048	17	17	24	0.5	0.5	0.8
Diphtheria, 055	6	8	19	0.2	0.2	0.6
Whooping cough, 056.....	2	10	20	0.1	0.3	0.6
Meningococcal infections, 057.....	22	16	32	0.7	0.5	1.0
Poliomyelitis, 080, 081.....	7	9	28	0.2	0.3	0.9
Measles, 085.....	15	12	17	0.5	0.4	0.6
Malignant neoplasms, 140-205.....	3491	3480	3065	109.9	110.1	96.7
Diabetes mellitus, 260.....	346	354	319	10.9	11.2	10.1
Pellagra, 281.....	20	13	23	0.6	0.4	0.7
Vascular lesions of central nervous system, 330-334.....	3898	3550	3375	122.7	112.4	106.4
Rheumatic fever, 400-402.....	37	49	46	1.2	1.6	1.4
Diseases of the heart, 410-443.....	9257	8923	8268	291.5	282.4	260.3
Hypertension with heart disease, 440-443.....	1736	1746	1972	54.7	55.3	62.2
Diseases of arteries, 450-456.....	632	554	458	19.9	17.5	14.1
Influenza, 480-483.....	265	127	265	8.3	4.0	8.3
Pneumonia, all forms, 490-493.....	794	832	910	25.0	26.3	28.1
Bronchitis, 500-502.....	55	56	45	1.7	1.8	1.4
Appendicitis, 550-553.....	44	40	44	1.4	1.3	1.4
Intestinal obstruction and hernia, 560, 561, 570.....	149	122	140	4.7	3.9	4.4
Gastro-enteritis and colitis, under 2, 571.0, 764.....	137	144	150	4.3	4.6	4.4
Cirrhosis of liver, 581.....	182	151	150	5.7	4.8	4.4
Diseases of pregnancy and childbirth, 640-689.....	69	66	120	8.1	7.7	14.1
Congenital malformations, 750-759	407	363	356	4.9	4.3	4.4
Accidents, total, 800-962.....	1974	2030	1888	62.2	64.2	59.1
Motor vehicle accidents, 810-835, 960.....	950	1005	845	29.9	31.8	26.1
All other defined causes.....	4855	4809	5174	152.9	152.2	163.3
Ill-defined and unknown causes, 780-793, 795.....	1063	954	1148	33.5	30.2	36.0

*Rates: Birth and death—per 1,000 population; Infant deaths—per 1,000 live births; Fetal deaths—per 1,000 deliveries; Maternal deaths—per 10,000 deliveries; Deaths from specified causes—per 100,000 population.

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THE TREATMENT AND COMPLICATIONS OF RETINAL DETACHMENTS

GRAHAM CLARK, M. D.

Associate in Ophthalmology, Columbia University College of
Physicians and Surgeons

New York City

The title of these talks, "The Treatment and Complications of Retinal Detachments," would seem to indicate two papers or, at least, one paper in two parts. When one is familiar with this disease, however, it is easy to see that this title can be transposed to "The Treatment of the Complications That Are Retinal Detachments."

It would seem that the displacement of a piece of tissue, no larger than the skin covering the ball of one's thumb, within a closed space, which will hold only a teaspoonful of water, should offer few, if any, significant variations. The actual picture, however, is one of such complexity as to allow nearly infinite variation arising from the factors of age, growth, physical and phylogenic change, physico-chemical change and the psychic state.

The proper consideration of the treatment of the retinal detachment must, therefore, approach the goal of cure by many converging avenues leading from the fields of anthropometry, psychology, anatomy, physics, embryology and physiology. An effort will, therefore, be made to trace these separate avenues as they converge on the cure of this disease through the zones of the preoperative, the operative and the postoperative periods. These avenues are to be viewed from both sides; namely, the side of diagnostic interests and the side of therapeutic interests. These latter two will, however, not be separable as topics as they overlap to the point of nearly being identical.

In the preoperative zone, the factor of age offers complications chiefly at its two extremes; that is, in the consideration of detachments in infants and in the aged. In the infant the detachment is usually secondary to some other major pathologic process. Of these, the congenital malformations

are the most common. These invariably involve the region between the equator and the ora serrata, and are cystic in nature. It should be borne in mind, however, that these spaces which we lump under the term "cysts" are hypoplastic rather than degenerative, for the developmental growth of the retina takes place in this area and, paradoxically, it is the region most sparsely supplied by the retinal circulation. As the globe grows, the retina is stretched backward at the expense of this area so that any tissue weakness will show up here in the form of a thinning and breakthrough of the tissues between the thicker and stronger prolongations of the ciliary ridges. The resulting picture is one of variations in degree from an evenly spaced row of cystic areas at the ora (most commonly in the lower temporal quadrant) to a state where the entire peripheral retina is represented only by a series of radial strands reaching forward to the pars plana, resembling tent ropes, as Lindner so aptly described the state.

Congenital retinal cysts, caused probably by an aplastic failure of a larger area of the nerve layer of the retina, may rupture and produce a true detachment. This rupture is uncommon in the young but the cysts themselves are not uncommon and are a differential point of diagnosis in this age group. The dome-like appearance and the thin transparency of these lesions make the diagnosis easy and, combined with these, is the scotch-grain-leather pebbling of their surface.

Detached retinas may also be a complication of minimal degrees of retrolental fibroplasia so a history of prematurity should activate an area of suspicion when examining an infantile detachment. The lower temporal band of tense tissue from the disc to the pulled-back ciliary process is prominent and offers an easy diagnostic point but, to counter this, that same tense band presents a

considerable therapeutic obstacle.

The oral dialysis, usually termed the retinal disinsertion, is also seen in infantile detachment but it is uncommon and so we will leave this entity to be considered under the juvenile group.

The picture of the retinal detachment in the senile period shifts its etiologic focus from the lower temporal quadrant to the upper nasal peripheral retina. The reason for this is unknown. Here the complications become multiple even in this preoperative zone, for the retinal detachment is the product of degenerative change, and here it is met by all the other degenerative changes to which the human animal is heir.

Characteristically, the detachment of the senile years tends to be thin and flat, caused by small holes in the far peripheral retina. These holes tend to be smaller than those seen in the younger patients; the round holes are usually multiple and virtually indistinguishable from the cysts from which they arose and by which they are surrounded. The classical horseshoe tear is decreased to sparrow-tongue size. It is here that the facility of scleral depression becomes most advantageous, but it must be borne in mind that it is also here that this maneuver is most hazardous as the retinas of this age group are most fragile, and the multiple holes you find may be the product of your examination rather than the result of the disease process. It was this fact that caused the earlier European authors to speak against and abandon this form of preoperative examination.

The small, unyielding and often displaced pupil of the aphakic eye is another preoperative complication of the senile patient. I believe that any surgeon who meets many retinal detachments will be found to do many more complete iridectomies than his brother who is chiefly concerned with the beauty of his cataract extraction. Since one in every twenty cataract extractions results in a retinal detachment, this is a factor which should be prominent in the thoughts of the cataract surgeon.

The juvenile and adult detachment cases have few complications which can be listed under the heading of "age" but they make up for this in their other aspects so we will save time and space at this point, confident that it will be more than used up later in the discussion.

In the preoperative aspect of the retinal detachment patient, the general physical state is important, for the eye is part of the body and not simply housed in it. You will remember the story of the ophthalmologist whose patient complained of a stomach ache. He glared at the patient and replied, "Sir, to me you are an eye. The rest of you is only a tumor!" There is an uncomfortable amount of truth in this caricature.

Let us illustrate the importance of this point by listing a few of the bodily states which directly affect the treatment and prognosis of the retinal detachment.

1. Marfan's syndrome is obvious through its ocular involvement. Its dislocated and often cataractus lens by itself makes for a poor prognosis, but the cardiac complications which accompany this complex in 75 per cent of those so afflicted may be a more serious hazard than the threatened loss of sight.

2. Congenital defects of the face and neck, such as harelip, palatine malformations or mandibular hypoplasia, are common companions of surgical failures in detachment patients. After all, 75 per cent of congenital anomalies involve the eye, so when one such anomaly is present it is wise to suspect that the eye has also suffered some defect in its formation.

3. Rheumatoid arthritis is so closely associated with disease of the uveal tract as to be an automatic warning in a treatment based on the creation of a choroidal insult.

4. The thrombotic state, as evidenced by coronary or cerebral vessel occlusion, is a warning of impending danger, for should anticoagulants (particularly heparin) be necessary in the immediate postoperative period, the curative chorioretinal adhesions will be seriously weakened or completely blocked.

5. Asthmatic states and atopic dermatitis of major proportions which are under control by steroids, or may require steroids in the immediate postoperative period, are a serious handicap as it has been our observation that the course of the chorioretinal adhesions is blocked by the steroids so that their formation may be delayed by a matter of weeks and speed of healing is essential to success.

6. Gout, too, should be included as it is a disease with ocular manifestations which, though quiet, may be precipitated by the psychic trauma attending the eye disease.

Thus we could go on at great length, listing the diaphragmatic hernia, which may produce a gastric hemorrhage from the stasis of its varices in the prone position, and the spinal disease, which may make prolonged bedrest impossible, but these few will serve to highlight the position of this road block in our avenue to success.

The ocular complications are, of course, part of the physical state but they are of such prominent position in the preoperative consideration as to merit brief but separate mention.

We have spoken of the difficulties imposed by the presence of a partially or completely cataractus lens. Of these two, the partial lens opacity is

the greatest problem, for it obscures the retina from adequate study, yet is usually not sufficiently advanced to warrant the hazardous step of its extraction before the detachment surgery. This is compounded as a problem by the knowledge that, if the detachment surgery is done first, the cataract formation will be precipitated and we may end with an obscuring cataract covering a retina which may or may not be sufficiently firmly reattached to permit the later extraction of the lens. This is truly "Hobson's choice" and a very unhappy Hobson.

Fortunately, a third avenue has now been opened which, at least on first trial, appears to offer a solution to this dilemma. This is the use of an implant of normal human vitreous after removal of the lens and subsequent repair of the detachment after the cataract wound has healed. To do this, the lens is removed, after a wide, complete iridectomy, by loop extraction. Here the loss of vitreous is welcomed for it not only shows that the anterior hyaloid is ruptured to permit entrance of the new vitreous but it also allows more of the normal vitreous to be injected with the hoped-for lytic action on any existing vitreous strands. After the lens has been removed and the wound edges carefully cleared of any hyaloid strands, the corneoscleral sutures are tied in the conventional manner and supplemented by enough marginal sutures to insure that the wound will withstand the immediate restoration of the intraocular tension without leaking (usually four corneoscleral sutures are sufficient). An anterior chamber irrigating tip is then placed onto the syringe containing the donor vitreous and it is injected into the anterior chamber until the globe is firm. The reaction of the eye in the postoperative period will be found to be less than normally follows an uncomplicated intracapsular extraction, and after a month the eye is ready for the attack on the detachment with good visualization and surprisingly good results. This same technique may be employed in the case of an aphakic eye where an updrawn, immobile pupil prevents proper visualization of the detachment. Here an inferior sphincterotomy should be added to the complete iridectomy and again the unaccustomed welcome of the escaping vitreous.

The existence of previous treatments for the detachment offers complications in the preoperative period because of the difficulty in visualizing small retinal holes in atrophic retina overlying choroidal scars. You are all familiar with this state and I have no answer for it save backbreaking hours of study with the ophthalmoscope.

The last ocular complication we will take up is fortunately seldom met but is, even in its rarity, impressive enough to merit inclusion. This is the sudden collapse of the eye from a massive uveitis

secondary to the detachment. The first impression one gets is that the globe has spontaneously ruptured and the doctor's first reaction is, "Thank heaven it happened before I touched it!" and his second is to abandon the eye as hopeless. We have found, however, that the use of deep heat through the microwave generator and mydriatics, aided if you must by systemic steroids, will bring these eyes around so that eventual detachment surgery is quite simple and uncomplicated. I must here stress the factor of heat in reestablishing the collapsed circulation in that hot compresses, infrared or diathermy are completely inadequate.

The isolated focus of choroiditis which may co-exist with a small detachment in another part of the eye is mentioned only for contrast. Repeated clinical experience has shown that the treatment of the detached portion of diathermy will effect an immediate and complete remission of the focus of choroiditis. Care must be taken, however, for often when the diathermy lesions become quiet, the choroidal focus may flare up.

The mental state of the patient in the preoperative phase is of paramount importance second only to the ocular conditions. This should be the subject of a paper longer than this whole presentation in that it has so direct a bearing on the success or failure of retinal detachment surgery. The retinal detachment patient, unless he has faith and philosophy possessed by few, is a badly frightened animal and it is a well established fact that tissues do not heal in the presence of the state of fear and prompt healing is essential to the successful treatment of the retinal detachment.

The fear of the detachment patient is not a rational fear of the conscious mind but the deep, eroding fear of the underlying animal threatened by blindness and, therefore, death.

This is not the conscious fear which can be dismissed by the reassurance of the surgeon that "everything is going to be all right" but one which will and must be met at every turn in the treatment by recognition and concerned help from doctors, nurses and, if possible, the hospital chaplain. It may take days to relieve this state of fear but it is essential.

The tranquilizing drugs can cover it but not remove it. The barbiturates usually simply convert it from an anxiety state to an agitated depression. The only answer is for the surgeon and those helping him, through genuine empathy and concern, to take the patient's burden on their shoulders and, carrying it with him, lead him into the light of hope based on firm faith:—faith in himself—faith in his doctor—faith in God.

This is no preaching of "faith-healing" but the undisputed fact of the benefit if not the require-

ment of faith in healing. In no disease is it so obvious as in this one.

To continue, now, into the zone of complications found in the operative phase of our picture, we should begin, as all operations must, with anesthesia. There are many surgeons who hold that local anesthesia is adequate for retinal detachment surgery and that the added risk of general anesthesia is not warranted. I have been told this by many surgeons but never by a patient who has gone through such a procedure. In fact, I find it a common experience for such patients, when told that the operation will be done under general anesthesia, to express profound relief and others, when asked their opinion of local anesthesia, to say: "Please God, never again!" I vividly recall the morning when I was watching one prominent surgeon do a scleral procedure under local anesthesia. The procedure was well into its second hour and the patient was beginning to moan and complain despite attempts to reestablish the block of the ciliary ganglion by injections into the now open muscle cone, whereupon the surgeon said to the patient, in unctuous tones, "Remember, we said we weren't going to feel anything today." How fortunate, for the sake of the ladies of the nursing staff present in the operating room, that the level of sedation was sufficient to prevent the patient from making an adequate reply.

The maximal effect of a block of the ciliary ganglion by perfusion of the surrounding fatty tissue with 2% procaine is about 45 minutes and this block has little effect on the conjunctival sensitivity or on the pain produced by pulling on the extraocular muscles and, for those using the spark gap type of diathermy generator, the tissues act as a filter and allow considerable electrical nerve stimulus from this source as well.

If local anesthesia is employed it should either be supplemented by a basal anesthesia of rectal Avertin or used to supplement a general anesthesia of one of the intravenous drugs. In the latter use it is very helpful in cutting down on the amount of general anesthetic agent used and is a strong agent against the production of cardiac or respiratory arrest through traction on the extraocular muscles.

When under general anesthesia with a retrobulbar block, it will be found helpful to instill a drop or two of topical anesthesia before closing the conjunctiva. This will allow the anesthetist to bring the patient out of surgical-plane anesthesia by the end of the operation and materially shorten the recovery period. The clouding effect of the topical agents on the cornea will not be troublesome at this stage.

With the patient asleep, our next problem is one of exposure: exposure of the fundus by good

pupillary dilatation and exposure of the operative field by adequate incision.

Little need be said about either the need for or the method of obtaining good pupillary dilatation but a word of reminder should be included, in cases with sluggish pupils, that excessive use of mydriatics can produce poor visualization by corneal damage which will more than offset the gain through dilatation, and in such cases epinephrine or phenylephrine injected under the conjunctiva around the limbus at the operating table is not only more effective but leaves the corneal epithelium unharmed.

Further, the preservation of corneal transparency may be aided by the use of $\frac{1}{4}$ per cent methyl cellulose solution as a moistening agent in place of saline or Ringer's solution. The conjunctiva is by far the best agent in maintaining or restoring corneal transparency and can be employed by either allowing one lid to cover the cornea during the operation or by tacking your conjunctival flap over the cornea. Some have advocated a disc of gel-film to cover the cornea but, in my hands, I have found this to be a complication rather than an aid to surgery since this material has a frustrating ability to slip from the place where it is wanted.

As in all surgery, a prime complication in retinal detachment work is inadequate exposure of the operative field. I firmly believe that one of the main advantages gained by the addition of the scleral procedures to the surgery for retinal detachment is through the greater exposure required by these procedures. A large conjunctival incision is not enough but to this should be added the canthotomy to widen the palpebral aperture and the removal of extraocular muscles (particularly the obliques). This latter not only increases the surgical field but also removes the hazard of obstruction to the diathermy currents by unnoticed inserting muscle tendons. If properly repaired, these procedures, in themselves, produce few complications in the final result but if they are not done when needed they can completely nullify the major effect of your surgery by the unforgivable sin of doing "not quite enough."

Exposure in reoperated cases presents a large number of added problems but time and space prevent their inclusion in this presentation save to sound a note of caution. This is the region where angels fear to tread!

Having discussed anesthesia and surgical exposure, it would seem logical to proceed with a discussion of the various types of surgery, but I would like to pause to point out that this discussion should properly come in the portion of the presentation concerned with the preoperative period. The type of procedure to be employed, its

placement, and the method by which the desired effect is attained must be fixed before the patient enters the operating room, and at this point we should properly limit our discussion to the handling of surgical complications imposed by the unforeseeable conditions of the tissues encountered. However, like the toastmaster introducing the after-dinner speaker "who needs no introduction," I shall say a word or two about the surgical spectrum from which we have selected our operation.

Retinal detachment surgery is a mechanical process whereby a structural and functional harmony is restored between the sclera, the choroid, the retina and the vitreous. These four tissues have widely differing physical characteristics and yet are required to function in physical contact and physiologic interdependence with each other. Surgical restoration of an acceptable state of harmony between them must, therefore, recognize and compensate for these states as well as the additional changes imposed by the disease process which resulted in their separation. To this end we are slowly acquiring a spectrum of surgery, each component of which resembles the others in its purpose but each differing in its major effect.

1. The electrothermically produced adhesive choroiditis known as "diathermy." This, in any of its many variants, is our basic and indispensable tool which must be employed in all cases. The effects of the output of the various generators commercially available are widely varied and if intelligently employed can markedly improve the surgical results but if ignored can cause unnecessary failure.

For gross classification there are two methods of producing electrosurgical high frequency currents: (1) by employing one or several spark gaps, or (2) by the use of a vacuum tube oscillator. From the spark gap we get a damped jumble of frequencies which produce a high-voltage monopolar current of low heat content which we term "fulgurating" or "desiccating" since its method of tissue destruction is by the boiling of the tissue fluids and explosion of the cells. It causes little coagulation and no carbonization and its greatest attribute is that it heals without scarring, thus making it excellent for the removal of skin blemishes or severing strictures. It is not suited for retinal detachment work. Also, from the spark gap we get a bipolar damped current of high heat content which we call the coagulating current. This, because of its high heat component, is good for closing bleeders and would be particularly good for creating the choroidal burns necessary in the sealing of retinal tears if it were not also possessed of a fickleness which causes it to stray off with surface moisture or attractive blood vessels and never carry out its assigned mission.

The vacuum tube generator's output is a continuous (undamped) stream of uniformly high voltage peaks which, by the blasting effect of the high peak voltage, breaks its own circuit before heat is generated and therefore seems to melt a path through the tissue without coagulating or carbonizing. This we term a "cutting current." It is extremely constant in contrast to the fickle coagulating currents but its low heat content requires that the points of application be placed much closer together when forming a fluid-tight barrier about a retinal defect. A blend of the cutting and coagulating currents is produced by some generators and is most satisfactory for detachment work.

Next to the misapplication of the diathermy currents as a cause for complications is the production of gross operative or postoperative hemorrhage from the retinal vessels into the vitreous. So far as is known this is due to the stray current passing off in a highly conductive blood vessel and meeting resistance where it burns the wall of the vessel. This may occur near or at some distance from the point of application. It is best avoided by (1) the use of short electrodes which do not release their current near the retina, and (2) by using the less fickle cutting or blended currents. In advocating the short electrode I do not mean to include the ball surface electrode for this releases a large amount of current like a shotgun blast which may damage anything in the vicinity.

In all forms of diathermy there is an inherent danger of current failure because of tissue conditions, and with all types of generators the only adequate control is the ophthalmoscope. Contrary to the teaching of some, the surface marks on the sclera are not only not an indication of the amount of reaction in the choroid but are actually an indication of a lack of choroidal reaction, for the more current expended in burning the sclera the less there will be left to burn the choroid. The chief complication of the simple diathermy operation lies in its misuse in complicated cases where the retina is mechanically held away from the choroid by traction or shrinkage. Here, it is not only inadequate but also makes later scleral surgery difficult or impossible or may even cause further shrinkage beyond the reach of scleral surgery.

In line with the concept of the points of similarity in all retinal detachment operations, it should be mentioned that even in the so-called "simple diathermy" operation there is a good deal of accompanying scleral shortening through shrinkage. This shortening is, however, quite temporary as the sclera, thus burned, quickly becomes necrotic and stretches.

2. Midway between the simple diathermy and

the scleral resection is the sclerotomy and choroidal diathermy in which the path over which the choroidal reaction passes is cut through to the lowest scleral lamella with a single linear incision. Diathermy is then applied almost directly to the choroid at the base of the slit. After this, the fluid is released and the wound sutured. In the suturing of this wound lies the scleral shortening, for firm suturing with single armed, interrupted stitches will produce about 2 mm. of shortening and the use of mattress sutures can produce 4 mm. of shortening with a steep choroidal roll within the eye.

The complications of this procedure are few and chiefly stem from premature perforation with the attendant difficulty of obtaining adequate choroidal reaction from treatment at the base of a wet trench.

The scleral shortening procedures are well known, being the scleral outfolding of Everett and the lamellar scleral resection. No description of these is necessary. Their chief complication is, I believe, in excessive area reduction with the creation of loose folds of retina which, in the area of the hole, may cause leaks. Of the two, the outfolding is the major offender in that a 3 mm. reduction is almost the least that can be done, and you will remember that a reduction of 4 mm. will reduce the scleral arch to a flat line. Countering this disadvantage in the outfolding, however, are the two distinct advantages that (1) it can be done safely on a soft eye and, conversely, (2) it can be stopped at any point where the globe becomes firm, unlike the resection procedures where one may be faced with a firm globe and ten more millimeters of resection to close.

4. The scleral-inclusion resection, as outlined by Chamlin, is the intermediate link between the scleral resection and the scleral buckle (as advocated by Schepens). In its enlarged choroidal roll there is less danger of excessive area reduction but with this roll comes the danger of tenting the retinal hole open rather than closing it. Like its cousin, the buckle, it must be placed with great care at the posterior lip of the retinal tear or slightly behind it. This operation is well suited for pushing the choroid up under an equatorially tented area of retina or the radially tented arrow-head tears if placed meridionally.

5. The scleral girdle, with its encircling polyethylene tube or strip of fascia lata, is of great value in cases of severe or extensive retinal disease but its extreme number of complications make caution in its employment necessary. Its purpose is to create a new ora serrata at the equator of lesser diameter in order to meet the contracted retina and wall off an extensively diseased periphery, and in this it is effective but a

list of its complications will serve to show that it must be employed in full knowledge of the risk. These complications are (1) intractable glaucoma, (2) prolonged uveitis, (3) occlusion of the central retinal artery, (4) granuloma formation, and other troublesome foreign body reactions. Added to these it shares the complications also found in the lesser procedures so it is a procedure not to be lightly or widely employed.

6. The latest addition to our surgical armamentarium is one of the most intriguing and certainly attended by the fewest complications. This is the implantation of normal human vitreous aspirate to replace the volume lost by the removal of subretinal fluid with the simple diathermy procedure or the transplantation of this fluid portion in preparation for detachment surgery later.

Shafer started this series some seven hundred patients ago on the simple grounds that this fluid was the most logical replacement for its counterpart lost through subretinal drainage and that it would not only push the retina back into place but, being normal to the space, would stay there if the retinal hole was closed. Early trials were done only on eyes that had been declared surgically hopeless and not only were they well tolerated and successful in their initial aim but accompanying changes were noted which indicated that the injections also caused changes in that portion of the patient's vitreous which remained. These changes were the apparent lysis of bands in the vitreous and the release of retinal surface membranes. These changes have not been observed in all cases but have been seen often enough to stir up quite a good deal of interest. Regardless of the outcome of the studies on this seemingly miraculous action, there is no present doubt but that this fluid is the ideal replacement for the lost vitreous in retinal or any other operation.

The complications of this procedure are few and easy to avoid. Vitreous has no specific immunologic activity so it may be pooled and used without fear of reaction. It does not support bacterial life and, in the absence of spore-formers or massive contamination, will sterilize itself within 48 hours at 40° F. but it must be refrigerated for 48 hours and then cultured before use as an adequate safeguard. In no case where this has been done has there been infection and these cases are well over 700 in number.

Damage to the lens by the injecting needle and subretinal injection are possible complications but should be easy to avoid. Care should also be taken not to inject anything but vitreous. I have seen a piece of red rubber stopper floating near the nerve head.

Among the complications of retinal detachment none is so common or so serious as postoperative

redetachment. It is a complication occurring in one out of every four of our patients. Time does not here present an opportunity to take up the complications of secondary detachment surgery but a word must be said urging attention toward the consideration of this important complication for the time when it should be considered is at the time of the primary operation. All too often we find the requirements of the reoperative surgery blocked by the tissue damage caused by the first operation. The chief factor here is the widespread use of diathermy which denies access to the desired scleral area.

The two-week postoperative period is one in which the combined art and science of medicine meets a severe test. The eye is normally a rather isolated organ of prodigious strength and resistance, separated from the ailments of the rest of the body by singularly effective barriers but, in this period, we find that this prodigious strength and these barriers are gone and we must treat the patient as a whole in which the mind and body are inseparable and interdependent component parts. Here the isolated station of the ophthalmologist must be abandoned for the high, open ground of the physician.

The factor of fear has been mentioned and here we must meet it face to face as an anxiety state which delays the healing process where prompt healing is essential. Our preoperative therapy, we will hope, has given us at least a holding ground in this aspect of the fight for now we are faced by fear reinforced by the unrelieved solitude behind eye bandages. The patient is frightened and alone in a strange world and the physician must see to it that everything possible is done to combat this, assisted by the nurses, the occupational therapists, the chaplain and, if possible, the family. This is no time for the negative force of sympathy that simply wallows with the patient in his suffering but a time for the demanding positive force of empathy in which the physician and all others identify themselves with the patient through genuine concern and thereby bear him up with their combined strength.

Beyond the all-involving mental state there may be closely allied bodily changes such as the exacerbation of an ulcer, the recurrence of gout, or distention due to the ileus of the anxiety state. Asthmatic attacks or other atopic disease may be seen but these are more frequent in the convalescent period after the patient leaves the hospital.

To these is added the ever present specter of the postoperative thrombotic state with its heralds of thrombophlebitis and pulmonary infarct.

As in all other surgery, the greatest single factor of therapy to combat all of these is early ambulation and the resultant restoration of the normal

physiologic state of the body with immobilization only of the immediate area of healing.

I realize that in holding this position I face the strongly entrenched forces of past teaching but the path of progress requires that we shake the dead hand of custom from our eyes and follow the light of reason. In this instance the evidence offered by nearly nine hundred consecutive cases over the course of seven years, with a steadily increasing rate of success equaling or bettering others in the field, has proven our theory that the specific surgical attack on the detached retina ends as the patient leaves the operating table. No treatment beyond this point will convert a surgical failure into a successful result but poor handling of the healing process may interfere with an otherwise successful surgical process, and this healing process is dependent on a healthy mind and body.

The final result of all our converging forces comes at the end of the final or convalescing period. For the sake of simplicity I shall simply list the major complications of this phase with a word as to their probable cause:

1. Redetachment. This is due solely to faulty treatment, and for some still unknown reason usually occurs about the sixth postoperative week.
2. Uveitis associated with persistent, low grade orbital cellulitis. This is usually a foreign-body reaction to the suture material or implants.
3. Granuloma formation is found to be largely due to the presence of large amounts of silk or plastic with fistulization.
4. Persistent trigeminal neuralgia is usually more common after secondary surgery and is probably due to the extensive insult to the nerves.
5. Painful canthotomy scars with symblepharon at the canthus due to faulty closure of the mucosa of the canthotomy.
6. Muscle imbalance: usually the overaction of a resected muscle. This is best combatted by the recession of all muscles on reattachment. Some tell of good results through the use of gel-film beneath the muscles overlying the treatment area but this entails the hazard of delayed healing.
7. Activation of lens opacities due to insult of the anterior segment, either by direct trauma or interruption of the long ciliary blood and nerve pathways.
8. Macular degeneration. This is usually of cystic nature and there is evidence that it is due to electrical insult as well as the malnutrition imposed by separation from the choroidal blood supply.
9. Floaters and flashes. These are so common as to be the rule and the physician must constantly reassure the patient that they are just as common accompaniments of reattachment as detachment.

10. Slow restoration of vision. This is chiefly a concern to the patient and is best combatted by early warning and constant reminder from the surgeon. The degree of visual restoration is completely unpredictable but should not be judged by the surgeon for at least six months.

11. Finally and most worrisome is the possibility of a detachment in the other eye. This is a constant concern to the patient. We have no accurate figures but the average of the clinical impression of eight or ten prominent surgeons in the field

gives a figure of about 30%. Happily, the results of treatment in the second eye are far better than in the first eye (about 90% successful) due to the alertness of the patient for early symptoms, the constant, suspicious observation by the surgeon, and the lessons learned through the treatment of the first eye.

This has been a hasty survey of a large and complex field which, like the universe, is of unknown origin and unknown boundaries and pervaded by intriguing challenge.

EVALUATION OF CURRENT SURGICAL THERAPY FOR PEPTIC ULCER

EDWARD S. JUDD, M. D.

Section of Surgery

Mayo Clinic and Mayo Foundation

Rochester, Minnesota

Immediately after World War II the reawakening of interest in division of the vagus nerves supplying the stomach as an attempt to control processes of peptic ulceration gave great impetus to reevaluation of surgical treatment for this disorder. Several decades previously American surgeons had been in the habit of relying too heavily on simple gastroenterostomy as their surgical procedure. The theory seemed good, in that constant bathing of the region of the anastomosis with alkaline material to neutralize the acid factor at least partly responsible for the original ulcer, was expected also to protect against further ulceration. That this did not work in all cases is evident from the incidence of later marginal ulceration. Then, following the example of the continental surgeons, Americans employed radical gastric resection against peptic ulcer; and this in turn was carried (at times) to extreme lengths. It was, therefore, with considerable enthusiasm that vagotomy was accepted at first. In the ensuing years we have learned a great deal more about the physiology of gastric secretion and the alterations produced by a variety of surgical procedures, many of which included vagotomy as an integral portion. The lack of universal acclaim for any one operation, which persists down to the present day, bespeaks the shortcomings of all these methods. It should be accounted surprising that today, in spite of all our concentrated effort in laboratories and experimental centers, we are still in doubt not only as

to the exact mechanism of production of ulcers but also as to a universal treatment.

DUODENAL ULCER

Critical evaluation of management for duodenal ulcer indicates that it still is largely a nonsurgical problem. Only when the ulcer is out of hand should the surgeon be called on to attempt to control it. In our own institution we adhere rigidly to definite criteria for surgical treatment of duodenal ulcer, and operation is employed in only the complicated cases. This means that in nearly 85 per cent of the cases in which a diagnosis of duodenal ulcer is substantiated nonsurgical management will suffice. The improvements in measures of this type of treatment have simplified its application and made it far more convenient for the patient. They include methantheline (Banthine) and its refined products, which often have beneficial effects. So it is only in approximately 15 per cent—and certainly less than 20 per cent—of the cases that a surgeon should become involved in operative treatment. Included among objectives of any operation will be control of the acid-pepsin factors, although surgeons are fully aware of the influence of other factors also which as yet remain obscure. We have learned a great deal about the exact distribution of acid cells throughout the stomach. We are aware of the nerve supply of the stomach and the effect that this supply has during the various phases of gastric secretion and activity. And as surgeons we must consider also the effects of the hormonal factors, especially in the region of the gastric antrum. A variety of operations has been conceived and applied in very ingenious methods, so that the broad fund of available information has to do with not only

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The Mayo Foundation, Rochester, Minnesota, is a part of the Graduate School of the University of Minnesota.

laboratory animals but also postoperative patients. On the strength of all these considerations I am prepared to take a stand for the opinions of my colleagues and myself regarding surgical control of the complicated duodenal ulcer, and to offer evidence based on prolonged follow-up study to strengthen this stand.

Considerations in the Choice of an Operation—In deciding which operation to employ, all of the previously mentioned factors must be considered and the surgeon must view the patient as a whole. Racial and national characteristics are very important, and persons known to have come from environments of tension and excitement require a much more radical approach. The sex factor must be considered, also, for although duodenal ulcer is less common in women we often find among them a relatively more complicated situation which requires more extensive treatment. Age will help us decide, as the young, vigorous person with a long life before him will require more radical measures than the octogenarian whose only problem is one of stenotic changes distal to the pylorus with perhaps a very low free-acid gastric factor. Occupation of the patient will influence us, as the laboring man who has no control of his working hours, rest periods, and exact timing of feedings between meals presents a very different problem from the self-employed executive whose presence in the office is not mandatory at any specific hour. Of necessity, studies of the gastric acidity affect the degree of radicalism in the approach; an extremely high value for free acid, especially without any specific stimulus at the time the test is taken, is likely to sway us considerably. Secondary factors such as marked gastritis, marked distortion of the duodenum, and multiplicity of lesions rather automatically fit into our scheme in making our decision, also.

Perhaps the most important consideration of all is the technical difficulty we anticipate. The short, fat person with a florid complexion whom we can anticipate to be difficult for anesthesia, and certainly extremely difficult for surgical exposure, will present a vastly different problem from that of the tall, slender, muscular individual who might be an ideal candidate for an entirely different procedure. With all of these factors in mind, my colleagues and I have recently evaluated our results rather critically and have come to at least tentative conclusions.

Operations Available. Vagotomy Plus a Drainage Operation.—Vagotomy alone was abandoned long since in the treatment of duodenal ulcer. The difficulty with gastric emptying so far outweighed all other factors involved that it soon became apparent this operation by itself was not the answer for any situation. The next logical step was to employ a drainage operation with the vagotomy.

In regard to pyloroplasty combined with vagotomy we are not in a particularly strong position to be critical, as our series is not large enough to be completely convincing one way or another. We have reasoned that the duodenal ulcer requiring a pyloroplasty because of the extreme distortion which it has produced should hardly be expected to heal properly and may present extreme technical difficulty. The tendency toward recurrence of the duodenal ulcer, should the vagotomy not be completely effective, would be prohibitive. We are aware that in some centers this operation is used routinely, but our own results have been so much at variance with reports from them that we are persuaded to do a different type of operation.

Vagotomy combined with gastroenterostomy we must admit to be quite a satisfactory procedure, and currently we are using it on occasion. In fact, when we reflect on simple gastroenterostomy performed some decades ago we are impressed with the value of that operation alone, as a surprisingly large majority of the patients are living normal lives today, with no evidence of any recurrent ulceration. Those who did develop marginal ulceration, however, have had such extreme difficulty that we have been stimulated to attempt to protect against this complication by the addition of the vagotomy.

We are reserving the operation at present for three main groups of patients. First are those in whom proper gastric resection is contraindicated because of technical factors such as marked obesity, or extreme inflammatory change in the duodenum with secondary involvement of the pancreas and its ducts, the common bile duct and even the hepatic artery, or—in postoperative situations—a degree of adhesive reaction so marked that proper gastric resection is out of the question.

The second group is that in which a nutritional factor predominates. Many of its members are “finicky eaters” at best and scarcely could be expected to accept a normal diet even under the best of circumstances. Therefore they may be poorly nourished and the imposition of a high gastric resection on them would be foolhardy, as the probability of the “dumping syndrome” and chronic malnutrition would be most forbidding.

In this regard we are hearing some disturbing reports at present, which suggest that the complete preservation of the stomach in this operation is not so beneficial as we had all surmised. We find that the dumping syndrome is seen after this conservative procedure also, and may be actually as severe then as after a resection. However, the difficulty following treatment in our own hands has been somewhat less marked, and we continue to use vagotomy and gastroenterostomy on selected occasions.

A third very small group of patients is composed of those extremely elderly individuals with stenotic changes distal to the pylorus and less marked free-acid activity. Our mission in such cases is relief of the obstruction, since time usually does not permit marginal ulceration to develop.

Modification of Gastric Resection.—Among modifications of gastric resection are the tubular resections, segmental resection of the mid-portion of the stomach with or without vagotomy but usually including pyloroplasty, and other interesting variations which are being reported in increasing numbers. Our own estimate of these maneuvers is that they are interesting anatomic experiments which actually carry at least as great a surgical risk as standard operations and to date have not proved in any way superior. Not having much firsthand experience with them, we are not in a position to be particularly critical.

Gastric Resection.—In our institution gastric resection remains definitely the most satisfactory operation. By it our mission of control of the acid-pepsin factor is accomplished in large part. The hormonal control elaborated by the antrum is eliminated completely, although the "cephalic phase" is still present. On a theoretical basis at least, since the gastric remnant has a reduced number of acid cells, and since the alkaline intestinal content is constantly delivered into the gastric remnant, an ideal situation has been brought about through surgical treatment. We are the first to admit that this ideal is not achieved in anywhere near 100 per cent of the cases.

In our early enthusiasm we insisted on a 75 per cent resection. This was accomplished without vagotomy and was effected most commonly as a posterior type of anastomosis. We reasoned that the most proximal portion of jejunum would be the most resistant to recurrent ulceration, and that the "short loop" method would be far preferable for that reason. The immediate complication of greatest concern is the status of the duodenal stump. A short, properly draining loop for the proximal portion of the jejunum will have considerably less difficulty with increased intraluminal pressure, which we feel is the greatest single cause of disruption of the stump. We have relaxed somewhat our zeal for the posterior anastomosis, having found that the theoretical advantages may not be actually apparent in all cases. Thus, in obese patients and others with a short, thick mesocolon where a posterior anastomosis might be dangerous, if not actually impossible, we have not hesitated to employ the anterior route.

The question arises whether it is mandatory to remove every duodenal ulcer. We are firmly convinced that such a practice would be a mistake. The gastric resection is designed to alter appre-

ciably the patient's gastric and duodenal physiology. The mere surgical excision of a temporary anatomic change in the form of a duodenal ulcer is not the entire answer. We remove the ulcer when it can be done safely, but should there be too great a threat to neighboring vital structures we are satisfied to close the duodenum proximal to the ulcer. In no case have we felt that this was an inadequate operation nor have we experienced difficulty with the ulcer in the short period that it requires to heal completely after operation.

At the present, therefore, our preference is a resection of approximately two-thirds of the stomach. We prefer to close the lesser curvature aspect after the manner of Hofmeister. It enables us to remove all or most of the lesser curvature, thus excising more of the acid-bearing portion. This permits a considerably smaller anastomosis which we have reason to believe will lead to less of the dumping syndrome and the malnutrition problem. Technically the anastomosis itself may be performed in the wound more readily than would be the case with a full-width Polya, where occasionally one finds difficulty of exposure during anastomosis. We find that currently in our institution 86 per cent of the operations for duodenal ulcer are gastric resections. This is being accomplished with a mortality rate that in the last several years has varied between 1 and 1.8 per cent, which we feel is acceptable. The morbidity has been reduced steadily, so that frequently the patients are dismissed from the hospital in 1 week. My colleagues and I have been enthusiastic about the routine use of a soft Penrose drain in the stump area, brought out through a stab wound. Although the incidence of stump leakage is extremely low, we find that the routine use of the drain solves the problem of trying to decide which stump should be drained and which should not. Sometimes the insecure-looking stump will hold well, whereas the very secure looking stump may leak on the tenth or twelfth postoperative day if any obstruction has developed in the proximal loop.

Hemigastrectomy Plus Vagotomy.—Just at this time several of us are engaged in analyzing a series of cases treated by hemigastrectomy plus vagotomy. In dealing with patients who might well have been candidates for great nutritional problems postoperatively, but who needed more radical treatment than simple vagotomy plus gastroenterostomy, we have been favorably impressed with this combined method. In this operation we have removed the antrum completely, believing it especially important in cases of acutely bleeding or recently bleeding duodenal ulcer where the ulcer may be removed at once. It is too early to give final impressions, but we have reason to suspect that the nutritional problem will be

minimized by this treatment and we hope that a long-term follow-up will show no increase in recurrent ulceration.

Billroth I Resection.—We have not employed the Billroth I resection frequently for duodenal ulcer, finding that most often the duodenum thus affected is so badly distorted that a proper anastomosis is out of the question. In addition, after the Billroth I operation the patients do not experience the constant regurgitation of alkaline content into the gastric remnant, as they do with some variations of the Billroth II method; and so we have found that recurrent ulceration is distinctly more of a problem after the Billroth I method has been used. In certain instances we do consider it, especially for elderly patients or patients with acutely perforated duodenal ulcer. In cases of gastrojejunal ulcer, where taking down a gastroenterostomy, resecting the jejunum with end-to-end anastomosis, and then widely resecting the stomach might result in prolonged surgical trauma, we are tempted to employ the Billroth I method of reconstruction, as the original duodenal ulcer probably will have healed well. Here again, however, we continue alert to the possibilities of further ulceration.

Why Not Vagotomy Plus a Drainage Operation for All Surgical Cases?—Visitors have frequently asked us this very question, as they are aware of reports of good results obtained elsewhere. We have found that the morbidity and mortality rates are at least as high with this operation as they are with gastric resection; and, further, the problem of gastric motility, although less formidable than in earlier years, is still a possibility. These unpleasant symptoms can make the patients quite unhappy. In addition, among our patients the rate of recurrent ulceration, which is comparable to rates reported by the enthusiasts who do nothing but this operation, varies between 7 and 15 per cent. We suspect that many enthusiasts have grouped all of their cases together, including the most recent ones. Remembering that the early resectionists found that often gastroenterostomy alone had been sufficient for many years, and then after that discovered gastrojejunal ulceration, we desire a long follow-up, preferably of 10 years' duration, to determine the issue. For these reasons, then, we still prefer gastric resection.

GASTRIC ULCER

Without belaboring the issue unduly, I may say that my colleagues and I as surgeons are all agreed—and find most of our nonsurgical confreres are agreed also—that surgical treatment has no peer in the management of gastric ulcer. I do not care to be drawn into a prolonged discussion about the incidence of cancer in gastric ulcer, but I do know that our own records consistently reveal a figure

of at least 10 per cent. More important, perhaps, is the patient who has been treated for prolonged intervals with what has been considered the best possible nonsurgical management, only to return at a later date with definite cancer of the stomach. If the results of surgical management were less satisfactory we might be a bit more hesitant, but the results are so good that we believe the vast majority of patients with gastric ulcer should be considered surgical candidates. The risk of the operations in our hands is less than 2 per cent. When this is calculated, along with the factors mentioned above, the place for surgical treatment seems quite secure.

Operations Employed for Gastric Ulcer. Billroth I Procedure.—In the recent past there has been a plethora of discussions concerning the Billroth I operation. We think that in benign gastric ulcer this operation still has a very firm place. We have been told that it is not radical enough, that surgeons minimize the resection in order to make the ends meet easily without tension, and that the recurrence rate is high. Our experience supports none of these statements. All of my colleagues and I have performed total gastrectomies with end-to-end esophagoduodenostomy, so we know that a Billroth I type of resection can be done very easily if certain criteria are kept in mind. We do not decide upon the method of reconstruction until the specimen has been removed. If there is any question about function or result we abandon all thought of a Billroth I procedure. In our hands the risk of this operation is considerably less than 2 per cent, and we have considered this satisfactory. Rather routinely we close the lesser curvature after the manner of Schoemaker, so that the entire lesser curvature aspect may be removed, forming a bit of a "tube" out of the greater curvature which will meet the mobilized duodenum nicely.

The advantages of this operation are obvious. The normality of the physiologic mechanism which appears to result appeals to us a great deal. The food is mixed with the bile and the intestinal secretion at a more nearly normal level. There is no dilemma about anterior versus posterior anastomosis and there is no problem about a duodenal stump. Elderly patients, especially, tolerate this operation well, as it occasions considerably less surgical trauma. Other abdominal conditions may be treated immediately if the Billroth I method is possible, so that coincidental resection of the colon, cholecystectomy, splenectomy, partial pancreatectomy, and operations of that magnitude can be embarked on with considerable assurance.

We have a distinct impression that postoperatively there is less of the dumping syndrome and therefore less nutritional disturbance. Our internists have analyzed the stool for loss of fat and ni-

trogen products and have found a very marked difference. The Billroth I patients do not lose these vital materials in such quantity as do many of those patients who have a wide Polya anastomosis.

Billroth II Procedure.—This method varies in no way from that employed for duodenal ulcer. In obese patients we commonly employ a transverse or bilateral subcostal incision which gives better exposure both for the duodenal stump and for the subsequent anastomosis. This may impose a bit more surgical trauma than the usual vertical midline incision, but ordinarily it heals well with less postoperative discomfort and apparently less possibility of ventral herniation. The amount of stomach to be removed is decided individually for each case. It is our impression that 75 per cent may be too radical for the usual gastric ulcer, as the acid-peptic factor appears to have considerably less importance in such cases.

Excision of the Ulcer.—In isolated instances we are justified in removing the ulcer, closing the stomach, and (usually) adding gastroenterostomy. We have thought it imperative for the pathologist to be the one to decide on the nature of the ulcer and, for that reason, have used this minimal operation when indicated, as in very elderly and poor-risk patients. It is useful when the ulcer is located at or next to the esophagus, so that its resection would require a total gastrectomy. Being reluctant to perform total gastrectomy for benign disease, we have felt that this is a satisfactory solution. The gastroenterostomy is added, since interruption of either curvature of the stomach has been known to produce serious motility problems postoperatively. In addition, it is thought that the gastroenterostomy may help prevent further ulceration.

Prophylactic Distal Resection.—This operation is mentioned only to condemn it. It has been suggested for the high-lying ulcer which cannot be excised without total gastrectomy. The surgeon assumes that the ulcer is benign and resects the lower portion of the stomach, hoping the ulcer will heal. It is a matter of record that healing has occurred in many of these cases, but we are of the opinion that accurate pathologic study is indispensable and we have not used this method.

Results of Surgical Treatment for Gastric Ulcer.—As mentioned previously, the morbidity and mortality rates following operation for gastric ulcer have been extremely satisfactory. The patients recover quickly and are symptom-free immediately. The result is permanent in most instances; true recurrent gastric ulceration should not be seen in more than 2 or 3 per cent of the patients. The dumping syndrome is extremely rare. Nutritional problems, for some strange rea-

son, occur far less commonly than following exactly the same operation performed for duodenal ulcer. The sum of the advantages of surgical treatment of gastric ulcer leaves little excuse for long persistence with any form of nonsurgical management except in a most unusual case.

GASTROJEJUNAL ULCER

Unfortunately, we still encounter the problem of gastrojejunal ulcer. It is considerably less common at present because gastroenterostomy is performed less often. The majority of patients who have peptic ulcer treated surgically remain free of recurrent disease. A few seem to form new ulceration in spite of repeated radical operations. At the present our policy is somewhat as follows.

If gastroenterostomy has been performed as the first operation, we are inclined to proceed at once with adequate gastric resection. This enables us to be certain as to the exact nature of the lesion and it removes the disease process immediately. The results have been very satisfactory with a surprisingly low mortality—lower, in fact, than that frequently seen with operations performed for duodenal ulcer.

If the gastrojejunal ulceration follows a gastric resection, we attempt to assess just what was done at the first operation. Often we subject the patient to a second resection if it appears that inadequate work was done the first time; and this, once again, enables us to be certain as to the exact nature of the lesion and to remove it at once.

In addition, we can check the region of the duodenal stump to be certain that no gastric antrum was preserved the first time. If such a remnant is discovered, removal is indicated to get rid of the gastrin factor.

If the marginal ulcer has followed what appears to have been a truly adequate resection the first time, we often are willing to settle for vagotomy. In this situation vagotomy often is dramatic in its result. Pain disappears immediately and healing of the ulcer takes a surprisingly short time. Once again, we prefer the abdominal route so that accurate visualization and examination of the abdominal contents are possible.

If there has been extreme reaction within the peritoneal cavity which would make the achievement of complete vagotomy doubtful, we are more inclined to carry out transthoracic vagotomy.

Associated Pancreatic Tumor.—Our experience with pancreatic tumors in frequently recurring gastrojejunal ulceration has been limited. Although we have found several such tumors, we often have proceeded with a more specific attack on the ulcer process in addition to removing the tumor. We have reason to believe that the tumors may be co-

incidental, as in some instances total gastrectomy has been required before the ulcer process was

controlled, even though extensive pancreatic resection had been accomplished already.

REPORT OF A CASE OF PYELONEPHRITIS OF PREGNANCY, ABORTION, PELVIC THROMBOPHLEBITIS, PULMONARY EMBOLIZATION AND PARADOXICAL EMBOLI TO THE EYE

WILLIAM H. ROBERTSON, M. D.

JOSEPH E. WELDEN, M. D.

and

JOSEPH M. DIXON, M. D.

Birmingham, Alabama

A 30-year old, white, para 3-0-3, first presented herself for obstetric care February 15, 1956. Her estimated date of confinement was October 13, 1956. The antepartum course was uneventful and she delivered a five pound, three ounce female without difficulty on October 1, 1956.

The patient returned for a postpartum check-up on November 12, 1956. At that time she was found to be mildly hypertensive, with a pressure of 160/95. She appeared to be extremely nervous. This was manifested principally by tremor and diaphoresis. She was put on Rauwolfia, 300 mg. daily.

The patient was next seen on April 3, 1957, with a history of amenorrhea since February 11, 1957. The diagnosis of pregnancy was made and the estimated date of confinement was November 19, 1957. The blood pressure was 155/90 so Rauwolfia was again started.

The patient did well until May 28th, at which time she developed chills, fever and pyuria. She was hospitalized and treated with broad spectrum antibiotics with good results. On June 11, 1957 the patient was seen for a routine check. Her blood pressure was 120/80 and the urine was negative for sugar and albumin.

On June 17, 1957 the patient presented herself again complaining of fever and flank pain. Urinalysis revealed numerous pus cells. Her temperature was 37.7 degrees C. She was thought to have recurrent pyelonephritis and was started on tetracycline. At 9:00 P. M. on June 17th the patient reported that she was worse and had developed nausea and vomiting. She was admitted to St. Vincent's Hospital at 10:30 P. M. Examination on admission revealed her temperature to be 38.8 degrees C., pulse 100, respiration 22, blood pressure 100/60. The heart was negative to auscultation except for sinus tachycardia. The lungs were clear. There was bilateral flank tenderness. The abdomen appeared somewhat distended. The bowel sounds were hypoactive. There was generalized abdominal tenderness, most marked in the lower quadrants. There was non-referred re-

bound tenderness. Muscle guarding was not marked nor was there any rigidity. The uterus was soft and there was no vaginal bleeding. Examination of the sediment of a catheterized urine specimen revealed pyuria with 10-15 white blood cells per high power field with an occasional clump, 2 to 4 red blood cells, 10 mg.% albumin, sugar negative and specific gravity QNS. White blood cell count was 10,000, lymphocytes 19, monocytes 1, polymorphonuclear leucocytes 78, eosinophils 2. The packed cell volume was 28%, hemoglobin 10.6 grams, 66%.

The patient was given tetracycline, 250 mg. every six hours and supportive therapy. Her blood was typed and cross matched.

At 3:30 A. M. June 18, 1957 the membranes ruptured spontaneously. The products of conception were found in the vagina and removed. The fetus measured 13 cm. from crown to heel. The placenta appeared to be intact. The blood loss was estimated to be 50 cc. One thousand cc. of 5% glucose in distilled water with 10 international units of Pitocin added was started intravenously.

It was noted at this time that the patient had developed a cough. A small amount of white frothy sputum was noted to be in the emesis basin. There was the suggestion of pink blood staining in some of the sputum. It was thought that the blood had come from tissue paper used when a bloody vaginal show had developed. The patient denied any chest pain although minimal dyspnea was present. It was not felt that she was cyanotic. The chest was clear to auscultation. Examination of the legs failed to reveal any signs of peripheral thrombophlebitis. The patient was watched by one of us for approximately 30 minutes and no further hemoptysis was seen, although some white sputum was coughed up. The nurses were instructed to watch the patient closely for signs of respiratory distress.

The patient was next seen at 8:00 A. M. At that time she was observed to be cyanotic and dyspneic. The emesis basin was filled with blood-tinged sputum. Examination of chest and legs was again

negative. A portable EPA of the chest was obtained and oxygen administration started. Medical consultation was obtained.

The patient was digitalized and heparinized with considerable improvement. The abdomen was soft and there was very little abdominal tenderness. The bowel sounds were normal. The uterine bleeding was minimal in spite of heparin administration. The Lee-White coagulation time ranged from 14 minutes, 20 seconds to 27 minutes, 5 seconds.

On the second (June 20, 1957) hospital day, the patient complained of pain in the right eye. Ophthalmologic consultation was obtained. The initial impression was iridocyclitis and the patient was started on local hydrocortisone and atropine. The findings changed and on June 21, 1957 the diagnosis of acute endophthalmitis due to septic emboli was made. This condition grew steadily worse, and June 26, 1957 an evisceration became necessary. Culture of the surgical specimen grew out *Paracolonobacter aerogenoides*. The patient continued to improve and was discharged on June 30, 1957. The convalescence was complicated by a hip abscess developing in a hematoma of the left buttocks. This required rehospitalization and wide excision and drainage. Following this the patient's convalescence was uncomplicated.

DISCUSSION

This would appear to be a case of pelvic thrombophlebitis with septic emboli to the lungs and paradoxical emboli to the right eye. One would suspect a uterine origin of the infection although the only obvious source of the infection was renal. The patient denied any intrauterine abortive manipulation and confirmatory of this was the presence of intact membranes and the absence of any bleeding or evidence of cervical trauma. Apparently the infection and the fever caused the premature delivery.

The presence of pulmonary embolization in the absence of evidence of peripheral venous thrombosis would throw suspicion on the pelvic veins as the possible source.

The paradoxical emboli to the right eye would have to be explained on the basis of (a) a patent foramen ovale, (b) access to the cerebral venous circulation by way of the vertebral venous plexus as demonstrated by Batson,¹ or through some (c) pulmonary arteriovenous shunt. The latter explanation would seem to be applicable. It has been shown that such shunts exist in the experi-

mental animal by Prinzmetal, et al.² It has been demonstrated in human lung that arteriovenous shunts exist up to a size of 500 micra.³

This case seems worthy of reporting because of the multiple and unusual complications.

2. Prinzmetal, M.; Ornitz, E. M., Jr.; Simkin, B., and Bergman, H. C.: Arteriovenous Anastomosis in Liver, Spleen, and Lungs, *Am. J. Physiol.* 152:48-52, 1948.

3. Tobin, Charles E., and Zariquiey, Manuel O.: Arteriovenous Shunts in the Human Lung, *Proc. Exp. Biol. and Med.* 75:827-829, 1950.

Minor Decreases in Work Load May Cause Obesity—

Using a standard typewriter instead of an electric typewriter could be the difference between staying thin and gaining weight.

So could the use of a standard steering wheel instead of power steering, walking instead of driving, playing golf instead of gardening, just standing up instead of sitting down, and many other "seemingly insignificant differences" in daily habits.

The difference lies in the amount of energy needed for each activity, according to an article in the May 10 *Journal of the American Medical Association*.

The basic cause of obesity is an intake of calories in excess of the needs of the body. Small increases in the amount of food eaten and small decreases in the work output of the body—as when a person switches to an electric typewriter—can over a period of time be responsible for overweight, the authors said.

Dr. Herbert Pollack, New York, and C. Frank Consolazio, A.B., and Gerhard J. Isaac, A.B., Denver, prepared the article for the A.M.A. Council on Foods and Nutrition.

They pointed out that each person has a "basal caloric requirement"—the number of calories needed to just stay alive—based on his age and the surface area of his body as measured in square meters. In addition, the calorie expenditure (or cost) per square meter of body surface for any activity can be figured.

It's a rather complicated procedure, but it has been determined, for instance, that there is a difference of almost nine calories an hour for each square meter of body surface between sitting quietly and standing quietly.

The differences in the calorie expenditure per square meter of body surface between lying down, sitting, standing quietly, and standing while moving in a limited area "do not appear large, but when multiplied by the total minutes during the day, they loom large," the authors said.

If an individual fails to reduce his caloric intake as he ages and decreases his activity, he will gain weight.

For instance, this could happen to a typist who switches typewriters—over a long period of time, of course. A girl who is five feet, three inches tall and weighs 120 pounds used 87.7 calories per hour typing on a standard typewriter, but only 72.9 calories with an electric typewriter. For a five-day week the saving amounts to 450 calories; in 10 weeks this can be the equivalent of a pound of body weight provided her food intake is constant, the authors said.

They concluded, "The importance of the calorie expenditure factor in the development of moderate obesity in the adult should not be minimized."

1. Batson, O. V.: The Functions of Vertebral Veins and Their Role in the Spread of Metastases, *Ann. Surg.* 112:138-149, July 1940.

New Drug Called Effective in Muscle Spasm Control—

A new drug that affects the central nervous system has been found to be effective in reducing skeletal muscular spasm, three separate studies have shown.

Reported in the May 10 Journal of the American Medical Association, the studies indicated that methocarbamol (Robaxin) is especially useful in cases of acute muscular spasm such as that resulting from a dislocated spinal disk. It is somewhat less effective in cases of spasticity resulting from such chronic conditions as a spinal cord injury or cerebral palsy.

The drug does not directly influence skeletal muscles, but acts upon certain parts of the central nervous system which in turn affect the voluntary skeletal muscles.

Methocarbamol "afforded greater relief of muscle spasm and pain for a longer period of time without undesirable side-effects or toxic reactions than any other commonly used relaxants . . .," according to Dr. H. Francis Forsyth of Bowman Gray School of Medicine of Wake Forest College, Winston-Salem, N. C.

The other researchers also noted the lack of serious side-effects. However, there were a few unpleasant, but non-toxic side reactions such as light-headedness, nausea, headache, and drowsiness. Dr. Forsyth warned that while the side reactions were "strikingly less" than with other drugs, they should be watched for "just as with any new drug."

Of the 100 orthopedic patients given the drug by Dr. Forsyth, 57 per cent had a "pronounced" response to the drug and 37 per cent a "moderate" response.

The relief of pain and spasm was pronounced in 25 of 39 patients with dislocated spinal disks. In most instances the attacks subsided quickly so that patients could continue to work or go back to work sooner than expected.

He also found it useful for patients with spasm and pain following surgery or bone setting, with severe whiplash injuries of the neck, and with torticollis in which the contracted muscles twist the neck, producing an unusual position of the head.

Dr. Herbert W. Park, Medical College of Virginia, Richmond, also found the drug useful for acute conditions, as well as for residual spasticity following spinal cord injury, spinal cord or brain disease, and cerebrovascular accidents. It had no effect on pain and spasm from arthritis, fibromyositis and poliomyelitis, he said.

The findings of Drs. Desmond S. O'Doherty and Charles D. Shields, Georgetown University Medical Center, Washington, D. C., were similar to those of Dr. Park. In addition, they noted that methocarbamol appears to have no value in the treatment of the muscular contractures of muscular dystrophy, the rigidity of Parkinson's disease, or the spasticity of multiple sclerosis. However, they believe it warrants further study for its effect on these conditions.

Tubeless Gastric Analysis Gives Fewer False Reactions—A new study has shown that the tubeless gastric analysis technique is reliable in the presence of disease previously thought to make it useless.

Drs. Theodore Rodman, Arnold Gutman, and Ralph M. Myerson, Veterans Administration Hospital, Philadelphia, said the technique works even when the patient has heart disease, miscellaneous other diseases, and mild to moderately severe liver and kidney diseases.

The gastric analysis test, which detects the presence or absence of hydrochloric acid in the stomach, is used in diagnosing various gastric disorders. In the tubeless technique, an organic dye is swallowed. A color test of the urine indicates the presence or absence of acid. In the standard test, the patient swallows a tube, through which stomach contents are drawn.

In the new study, reported in the May 10 Journal of the American Medical Association, 114 patients were given the tubeless test, which was followed by a standard test.

There were seven false reactions with the tubeless test among 26 patients with kidney disease, and one false reaction among 39 patients with liver disease.

The tubeless test was accurate among patients with heart and circulatory disease, gastrointestinal disease, and such miscellaneous conditions as pernicious anemia, multiple sclerosis, and diabetes.

Because of its simplicity and low incidence of false reactions, tubeless gastric analysis is well suited for early screening of gastric achlorhydria, they concluded.

Community Responsible for Care of Aged—The principal responsibility for the care of the aged rests on the family and community level, two St. Louis doctors said recently.

In fact, the aim in caring for the aged should be to keep them in the community and out of institutions for as long as possible.

In order to do this, each aged person must be treated individually. His major needs are reasons for living, good nutrition, adequate housing, recreation, and good medical care.

Some methods for meeting the individual's needs, especially the medical needs, are outlined by the doctors in the May 3 Journal of the American Medical Association. Drs. Joseph J. Costello, Jr. and George M. Tanaka base their recommendations on their experiences at St. Louis Chronic Hospital.

They said each community needs organized services that will help the aged person care for himself or be cared for by his family at home. These include help in nursing, diet planning, occupational and physical therapy and housekeeping.

A community information center is needed to tell the aged individual about community resources, they said. A counseling service in the center is extremely helpful in directing the person to required medical or other aid.

All agencies that work with aged individuals must carry on a constant screening process, the doctors said. In this way only those individuals who cannot possibly be cared for outside of institutions are referred to them.

Adult recreation centers offer the first screening contact where an aging person's physical disabilities and desocialization tendencies can be detected. Recreation workers can then refer the aged person to his physician for help.

Hospital day programs, in which individuals are brought to the hospital for day treatment but return to their homes at night, help them maintain some degree of independence and contact with the community, the doctors said.

When individuals are no longer able to live alone but do not need constant supervision, they might move to supervised boarding homes. These again help keep the aged persons in the community.

Rehabilitation—the constant working with the aged patient to help him care for himself—is important even after the patient is in a hospital or a nursing home, the doctors said. That rehabilitation can be successful is shown by St. Louis Chronic Hospital's experience in returning some completely dependent patients to the community.

Dr. Costello is medical director of St. Louis Chronic Hospital and Dr. Tanaka is chief of the hospital's medical department. They are also instructors in the department of internal medicine at St. Louis University of Medicine.



Editorials

DETECTION OF LEAKING VALVES

A method for detecting hidden leaks in the valve between the left chambers of the heart has been developed by scientists at the National Heart Institute of the U. S. Public Health Service.

The new method was described in technical detail in *The Journal of Clinical Investigation* for January by cardiologists Eugene Braunwald and George H. Welch of the Institute's Laboratory of Cardiovascular Physiology, and surgeon Andrew G. Morrow of its Clinic of Surgery.

To reveal the leak, these investigators raise the arterial blood pressure by injecting the artery-constricting hormone, norepinephrine, into the patient's blood stream at a carefully measured rate. Meanwhile they observe and record the effects of this increase in blood pressure on the pressure inside the left atrium.

A leaking valve is revealed if the pressure rises grossly in this chamber in response to the rise produced in the arterial blood pressure. In a normal heart the pressure rise in this chamber is slight because such gross changes in arterial blood pressure are largely excluded from the atrium by a tightly closing mitral valve.

The mitral valve normally opens fully to let fresh blood from the atrium descend into the dilating ventricle. Then, when the ventricle contracts to pump this blood to the body, the valve closes to prevent backflow into the atrium. The mitral valve is the heart structure most often crippled by repeated attacks of rheumatic fever.

When deformed by rheumatic fever, the two delicate lips of the mitral valve often become stenosed, or fused together at the edges so that they cannot open all the way to admit the blood when the ventricle dilates. Or they may fail to close tightly against the backflow of blood when the ventricle contracts—this is the leaky condition, known as mitral insufficiency. A combined condition of stenosis and insufficiency commonly affects the same mitral valve. Mitral stenosis and insufficiency, and the combined condition, are responsible for the deaths of approximately 8,000 persons and the lifelong crippling of countless thousands more in the U. S. each year.

The new diagnostic method is expected to be most useful against the combined condition, where the murmurs and blood pressure abnormalities of insufficiency are often masked by those of stenosis.

Detecting hidden mitral insufficiency before operating for stenosis may be of vital importance, because the valve-splitting operation usually performed for stenosis may actually worsen the heart trouble if the valve also tends to leak.

The new diagnostic method is based on findings from experiments on the hearts of dogs in which mitral insufficiency was produced. In these dogs the investigators used clamps to resist the ejection of blood from the left ventricle through its great artery, the aorta. They found that the blood, when thus confined in the contracting ventricle, seeks the "back way out" through the mitral valve. If the valve had any tendency to leak, the blood rushing back through it into the atrium raised the pressure in this chamber much higher than when the valve did not tend to leak.

Instead of clamps on the aorta, the investigators use norepinephrine in patients to increase resistance to emptying of the left ventricle. Norepinephrine was chosen because it is safe. It is a hormone that functions normally in the body to govern the pressure against which the heart must pump—it does this by varying the caliber of arteries. Because its effects on the blood pressure are fleeting, close control of the blood pressure both in the arteries and in the left auricle was possible at all times—an important safety advantage for the patients.

Following successful tests in dogs, the method was tried in twenty patients in the Heart Institute Clinic of Surgery. Seven of these had pure mitral insufficiency, seven had pure stenosis, and the other six had the mixed condition.

In the thirteen patients with insufficiency, the norepinephrine caused the pressure in the atrium to rise momentarily to an average of 47.8% of the rise in the arterial blood pressure—in some patients it went as high as 125%. In the patients with pure stenosis the increase in atrial pressure averaged only 8.5% of the arterial pressure increase. This difference was great enough to form

the basis for a method for detecting mitral insufficiency in difficult cases.

To record blood pressures in the left atrium, a slender filament of plastic catheter tubing was placed in the heart via the mouth, throat and windpipe—a catheterization technique called the “transbronchial puncture,” introduced into the U. S. by Dr. Morrow. Dr. Morrow sprays the back of the patient’s throat with novocaine and then makes a puncture with a hypodermic needle at the point where the windpipe forks. He then threads the catheter through the bore of the needle into the atrium, which lies just below the fork. The needle is then withdrawn, allowing the patient to relax in comparative comfort, with one end of the flexible hollow thread of catheter in his heart and the other end emerging from his mouth to be attached to recording and sampling devices.

WOMEN’S EXPECTATION OF LIFE

The ladies are now firmly established, statistically, as the stronger sex, according to Dr. Louis I. Dublin, eminent health statistician.

If there were any doubts before, current health and longevity tabulations show that women have not only held their position of advantage of a generation ago but have made still further gains, says the doctor, who is health and welfare consultant of the Institute of Life Insurance.

How long one lives is the ultimate measure of health he contends, and on this basis, the ladies are now several years healthier than men.

The average length of life of women in the United States is now 73 years. For men it is only 67 years. That is an advantage of 6 years for the women.

Both men and women have been adding years to their expectation of life. Since 1900, the gain for the nation as a whole has been 22 years. But the women’s expectation of life has increased 25 years in this period, while that for men has risen only 20 years.

This improvement has not been at a constant rate over the half century. Certain periods have shown spurts in the gain. The period of greatest gain appears to have been the five-year period after World War I, which accounted for almost one-fourth of the total half-century improvement.

According to Dr. Dublin, the female health record is better than that for males at all age brackets. More boy babies are born than girl babies, but apparently that is nature’s answer to the male’s poorer life outlook. Because almost immediately, the female infant records a better survival rate, and by teen-age the girls are approaching the period when they have their best hold on life, and when they show the greatest advantage over the

male group. For the 15 to 24 group, the male death rate is now three times that for females. This is a great gain over the record only 15 years ago, when the male death rate of this age group was less than one and one-half times that for females.

The greater relative gains shown by females at the younger ages have carried more women on to the older age groups—where women have an additional advantage over men. The woman of 65, for instance, has an expectation of 16 more years, while the man of that age can expect about 13 years.

This greater life expectancy of women is reflected through almost the entire range of diseases or disability, according to Dr. Dublin. Women show lower death rates than men from almost all of the major causes of death—all, in fact, with the single exception of diabetes. This has not always been true. Prior to 1945, women showed a higher cancer death rate than men. In the past 15 years, while the cancer death rate for women at most ages has declined 10 per cent, that for men has increased. In fact, the mortality rate among men for lung cancer has increased 180 per cent, in this period.

Women apparently don’t gamble with their lives as much as men, the female death rate for accidents being less than half that for men. In heart and circulatory disease, which accounts for half of all deaths, the female death rate is less than two-thirds that for males. Even in the infections, such as influenza and pneumonia, women show a death rate one-third less than men.

“Why is it that women are the more durable on the health front?” Dr. Dublin was asked.

“Apparently they have a basic physiologic advantage over men,” he said. “This is found pretty generally throughout the animal kingdom. Perhaps there is also an evolutionary factor at work. The female of the species is more important than the male for race preservation.

“Then, too, while there is not much statistical evidence other than absentee records in shops and offices, it seems quite evident that women show more inclination to take time out for sickness. That may be a long-term health factor. Perhaps this greater care, illness by illness, helps ward off the ultimate weakening of the system that brings on death. If so, this alone may be a contributing factor in making the ladies the stronger sex.”

TOPICALLY APPLIED FLUORIDES

To help protect the teeth of youngsters who live in areas without water fluoridation programs, a group of leading dental authorities have urged the use of topical fluoride preparations that could be sprayed or daubed on teeth periodically.

Dr. Donald Galagan (D. D. S.), chief of the Division of States Relations, U. S. Public Health Service, said although water fluoridation is the best known method of preventing dental caries on a public health basis, the measure is not available to many segments of the population, particularly those in rural areas with well water supplies.

However, Dr. Galagan said, the use of topically applied fluorides as a preventive dental decay measure has been known for 16 years, yet the dental profession has not used this procedure extensively. He noted that studies continue to support the effectiveness and practicality of topical fluorides in retarding dental caries.

Dr. Galagan suggested that topical fluorides be made available to all school children not covered by water fluoridation through organized community programs "on a public pay-or-part-pay basis." In addition, he urged the changing of restrictive state licensure laws which prohibit dental hygienists from applying topical fluorides.

Dr. Egil Klinkenberg (D. D. S.), chairman of the Massachusetts Society for Advancement of Dentistry for Children, said the practicing dentist's "best weapon" against dental decay at this time is topical fluoride treatments.

"A fluoride application should be part of each child's recall and prophylaxis visit to a dentist's office," Dr. Klinkenberg stated. "In this way, a single application of fluoride can be made to children's teeth at least every six months and such treatment can be conveniently coordinated with the routine practice of dentistry."

Dr. Benedict Kimmelman (D. D. S.), a researcher at Albert Einstein Medical Center in New York City, reported on results with a topical fluoride cream application.

"Applications of this cream to sound teeth on one side of the mouths of 90 patients resulted in the treated teeth developing 43 per cent fewer new cavities than untreated teeth of the opposite side of the mouth," Dr. Kimmelman said.

Dr. Finn Brudevold (D. M. D.), director of research at the Eastman Dental Dispensary, discussed studies at the Dispensary that showed topical applications of fluoride will increase the fluoride content of the outermost part of the enamel. "The fluoride deposited in the tooth is firmly retained," Dr. Brudevold noted.

Dr. Joseph Muhler (D. D. S.), professor of chemistry at the University of Indiana School of Dentistry, also stressed the importance of topical applications as a means of protecting persons not covered by water fluoridation programs.

THE ROLE OF THE MEDICAL PROFESSION IN EYE CARE

Reprinted from the Cincinnati Journal of Medicine,
March 1958

Many physicians are in doubt and have expressed concern at the misunderstanding and confusion of the public regarding eye care. Very little attention has been given by medicine in the past to the subject of public education relating to medical eye care.

The National Medical Foundation for Eye Care was organized by nationally recognized leaders in ophthalmology and is supported by American ophthalmologists for the purpose of gathering, studying and disseminating information to the medical profession and the public concerning the essentials of scientific eye care. The Foundation will prepare literature and lectures for the public explaining the basic scientific standards of good medical eye care, the qualifications of ophthalmologists and the training and functions of related technical personnel in the field of ocular therapy.

It should be emphasized that it is not the purpose of the Foundation to curtail the activities of licensed optometrists in the field of eye examination for the purpose of prescribing and fitting glasses, either by legislation or publicity.

It is unfortunate, however, that there should exist so much misunderstanding in the public mind concerning the terms ophthalmologist, optician, and optometrist. For a better understanding of these terms the National Medical Foundation for Eye Care published a pamphlet of definitions, quoted as follows:

An ophthalmologist is a physician—a Doctor of Medicine—who specializes in the care of the eye and all the related structures. He diagnoses and treats defects of focus, disorders of function, and all other diseases of the eye, prescribing whatever is required, including glasses. He is often concerned, as a consultant member of the medical team, with diseases of other systems of the body or general diseases which manifest themselves in the eyes—diabetes, toxemia of pregnancy, cancer, multiple sclerosis, tuberculosis and other infections, hypertension, muscular dystrophy, brain tumor and heart disease, among others. Ophthalmology is a branch of medicine and the ophthalmologist is an eye physician and usually also an eye surgeon.

An ophthalmologist has first completed the full course of medical studies and received the degree of M. D., served an internship in general medicine and surgery in an approved hospital, and has then taken special training in ophthalmology. Like the family physician, the ophthalmologist and all other medical specialists are licensed to practice all branches of medicine and surgery.

Oculist is a less commonly used name for ophthalmologist.

An *optician* is a skilled technician, auxiliary to medicine, who supplies and fits glasses on the prescription of a physician. He is trained to make the necessary facial measurements; to formulate the specifications necessary, and to make the glasses or other appliances; and to adapt them to the patient, placing them properly in relation to the eyes. He supplies glasses or other appliances only on the doctor's authorization.

An *optometrist* is a person who has met certain legal and educational requirements and is licensed by the state to engage in the practice of optometry. He is *not* a physician or doctor of medicine. The word optometry comes from two Greek words—*opto*, meaning "eye," and *meter*, "measure." The optometrist measures the focus of the eye for glasses. He is not qualified or permitted to use drugs for these tests or for any other purpose. He is not qualified or permitted to diagnose or to treat ocular disease. He may supply glasses on his own prescription. In most states he is also permitted, like the optician, to fill the ophthalmologist's prescription for glasses.

Early diagnosis in cases of defective vision is of the utmost importance if we are to achieve the ultimate objective—Prevention of Blindness. This can only be accomplished by helping the general public and the medical profession to understand the basic professional and scientific standards of good eye care.

Every child should have a medical eye examination before starting school. This is just as important, and in our considered opinion more important, than the generally accepted dental examination, both, however, being absolutely essential for the child's future welfare.

Every adult after the age of thirty-five should have periodic medical eye examinations to rule out such blinding conditions as glaucoma (the greatest cause of blindness in middle age, occurring in two per cent of adults over the age of forty), retinal disease and cataracts.

MEDICAL PROGRESS ASSEMBLY

The first annual meeting of the Medical Progress Assembly will be held at the Tutwiler Hotel, Birmingham, Alabama, September 7, 8 and 9, 1958. Sixteen of the country's outstanding medical authorities will appear on this program. The Assembly is sponsored by the Birmingham Academy of Medicine.

All members of the Association are invited, and it is hoped many will avail themselves of the opportunity to hear the eminent physicians who will contribute to the Assembly. Reservations should be made directly with the Tutwiler.

Salt-Metal Reactions May Cause Ring Rashes—Skin rashes from rings result from a reaction between metal and salt on the skin rather than from "too much acid in the system," according to an Indiana dermatologist.

Writing in the May Archives of Dermatology, published by the American Medical Association, Dr. L. Edward Gaul, Evansville, Ind., said his studies have shown that metals themselves don't cause skin rashes.

But when salt—either the normal salt formed on the skin after perspiration or table salt—reacts with metals and/or alloys a skin rash may occur.

Irritations from rings seem commoner than from other metal contacts on the skin, probably because the hands have so many opportunities for exposure to salt, Dr. Gaul said. The housewife is most apt to have rings on the fingers; in addition, she is most apt to have her hands in salt.

He noted that eating salted foods like nuts or popcorn can bring large amounts of salt under and around the rings. Many people test the flow of a salt shaker by salting their left hand.

He concluded that a study of jewelry metal might produce alloys sufficiently inert that they would not react in the presence of varying salt concentrations on the skin surface.

Parkinsonism Treatment Follow-Up Reported—A recent study has given added evidence that the technique of chemopallidectomy does improve the symptoms of Parkinson's disease.

Reported in the May 3 Journal of the American Medical Association, the study showed that persons who had undergone the operation are "for the most part in a better position" than those who had not had the operation.

In chemopallidectomy chemicals are injected into the globus pallidus, a part of the brain. When the globus pallidus is diseased, it contributes to the development of tremor and rigidity in paralysis agitans. The operation was devised in 1953 by Dr. Irving S. Cooper of New York University-Bellevue Medical Center.

Questionnaires were returned by 106 patients with paralysis agitans who had undergone neurosurgery six months to two years and four months earlier. In addition, 103 were returned by patients who had been considered for surgery but had not been operated on.

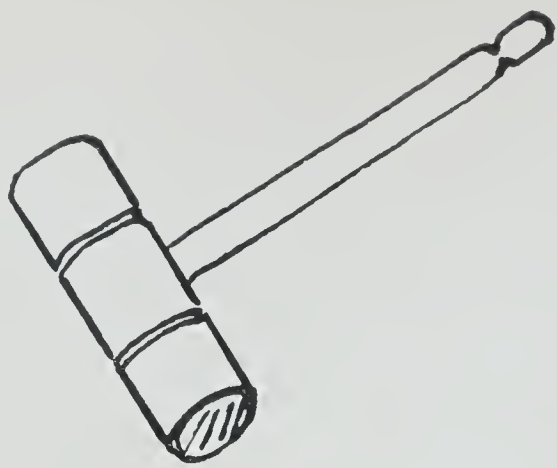
Of the group operated on, 89 per cent reported that tremor and rigidity on the side affected by the operation maintained improvement, while only 10 per cent of the control group reported improvement. Less than 5 per cent of the first group noted any worsening of symptoms, while 57 per cent of the controls reported this.

A similar but less striking trend was seen in the ability to carry out activities of daily living and housework.

The number of patients who had had surgery and were working varied little from the time of surgery. About 50 per cent of them were employed. However, 28 per cent less of the non-operated group were working at the time of the study than at the time of evaluation.

Even among those who underwent chemopallidectomy but were not working, there was a feeling that they were better able to work. While this is not sufficient for employment, it certainly contributes to a feeling of self-respect and motivation which may later be used in carrying out further rehabilitation, the report said.

The report was made by Manuel Riklan, Ph.D., chief of the psychological and vocational services, St. Barnabas Hospital, New York, and Leonard Diller, Ph.D., psychological consultant for St. Barnabas Hospital and coordinator of training and research in psychology, New York University Inst. of Phys. Med. and Rehab.



President's Page

WE HAVE CREATED A PROBLEM

Advancing medical knowledge and its application has created a real problem. I refer to the rapidly increasing population of people of advanced age. The widespread use of antibiotics has extended the life expectancy of people over 70 years of age tremendously. If the problem of atherosclerosis should be only partly solved, it taxes the imagination as to how old people might live to be. Old age can have a sweetness and mellowness that we all love. Often a surviving elder member of a family acts as a tie that binds it together when otherwise it might be scattered. There is nothing more heartening than the tender care, respect and solicitude a family lavishes on an older member that they love. On the other hand, the care of older people can, at times, become most difficult. When the economic situation requires that the older person live in the same home with the young family, it may create situations that are trying, that interfere with the development of the young children, and may actually threaten the security of the home. As individuals live still older and develop the inevitable complications of aging: loss of memory, inability to sleep at night, unsteady gait, loss of control of bowel and bladder, the problem becomes more acute. The financial burden of such cases can become overwhelming.

As physicians we are called each day to treat the many illnesses, both real and imaginary, from which these old people suffer. Many families look to us for counsel in the ultimate resolution of the problems that arise in their care. Since we have had much experience and since, in a measure, it is a problem of our making, we should give our best thoughts to its resolution. The writer does not presume to offer a solution but does beg you to give your earnest and profound thought to the subject. It does occur to me that, since the direction of the Hill-Burton Program in our state has been entrusted to our Board of Health, we should

use the facilities of the program to build well planned homes for older people. I can imagine a happy solution to old age in which an old person enters an attractive, comfortable, safe home where kind, trained attendants would look after him. To make this picture complete he would enter as a paying guest, the funds having been provided by himself or some member of his family. The ugly specter of inflation looms as a menace to this picture. Even in my experience I have seen a husband who was a good provider leave what seemed to be enough to care for his loved ones only to see the rising cost of living make it not enough. As doctors who are in contact with this problem I feel that we should use our influence and our vote to defeat those politicians who would cheapen the life savings of these elderly people by wild promises and projects motivated primarily by political expediency and personal gain.

Another problem that faces us is the proper use of drugs in treating older people. The pharmaceutical houses deluge us with drugs that propose to cure the many annoying symptoms, to promote tranquility, and actually create an *èlan*. Too often we find that the drugs do not measure up to their claims, almost always they are expensive and sometimes they develop dangerous side effects. Finally, I feel that we should reappraise our use of such artificial means as intravenous and tube feeding used to prolong the life of the very aged. We are not theologians but our training and experience bring us in constant contact with the natural phenomena of birth, growth, reproduction, decline and death. We must give thought to the problems that arise during this cycle.

Colman J. Furman



ORGANIZATION SECTION

RULES AND REGULATIONS GOVERNING THE WILLIAM CRAWFORD GORGAS AWARD

1. The award shall be known as the William Crawford Gorgas Award. It shall consist of a rectangular plaque on which shall appear the seal of The Medical Association of the State of Alabama in cast bronze, and this seal is to be situated between two bronze plates—one above bearing the name of the award and one below bearing the name of the recipient.

2. The award shall be made to a citizen of the state of Alabama who has been outstanding in health work and who does not hold the degree of Doctor of Medicine. The purpose of the award is to recognize a lay person for his efforts in the field of health.

3. There shall be solicited nominations by the Committee on Public Relations of The Medical Association of the State of Alabama from all counties via county medical societies. Nominations shall not be held over to the following year for consideration unless renominated by the respective county.

4. There shall be a screening committee composed of the Division Vice-Presidents; Secretary-Treasurer of the Association; the Chairman of the Committee on Public Relations; one other member of the Committee on Public Relations; two newspapermen and the Executive Assistant. The Chairman of the Committee on Public Relations shall serve as chairman of the screening committee and shall appoint the two newspapermen and the one other member from the Committee on Public Relations. The names of all nominees shall go to the screening committee for the purpose of evaluating their credentials and reducing the number of nominees to a maximum of three (3), and to arrange those names in order of preference.

5. Those names will be submitted to the Committee on Public Relations of The Medical Association of the State of Alabama which has been designated by the State Board of Censors to determine one name from those submitted to be the recipient for that year's award.

6. Each nomination shall be accompanied by a brief, substantiating the reason for the nomination. This may be in the form of a copy of a publication, report, or other materials describing the scope of the health work of the nominee.

7. The award shall be presented on the occasion of the annual session of The Medical Association of the State of Alabama.

Major Health Organizations Announce Program for Aged—Better health care for the nation's 14 to 15 million aged is the goal of a comprehensive program announced by the Joint Council to Improve the Health Care of the Aged.

The council's attack on the more knotty problems of health care for the aged is designed to: (1) increase opportunities for older people to obtain voluntary health insurance coverage, (2) expand health care facilities tailored to the needs of the aged regardless of economic status, and (3) develop more community health services for the aged.

The program will be implemented through the active and aggressive leadership of the council's four sponsoring organizations—the American Dental Association, American Hospital Association, American Medical Association, and the American Nursing Home Association.

"Member organizations of the Joint Council," said Dr. Edwin L. Crosby, director of the American Hospital Association and interim secretary of the council, "have already undertaken studies and work projects aimed at improving the health care of the aged." Among the many activities which these groups have undertaken or in which they have cooperated he listed the following:

(1) The American Hospital Association, in cooperation with the Public Health Service, is conducting a conference on the care of patients with long-term illnesses.

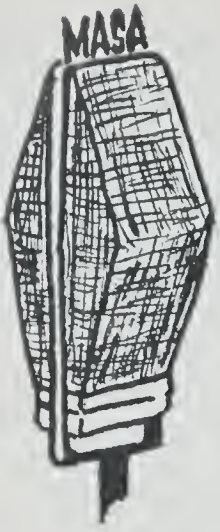
(2) An American Medical Association committee is working with the American Nursing Home Association in preparing upgraded standards for nursing homes which will result in improved nursing home care for the aged.

(3) A National Conference on Homemaker Services is being arranged under the joint auspices of the Department of Health, Education and Welfare and twenty-six national voluntary organizations including the American Medical Association. This project is aimed at reducing the financial expense of disabling illness among the elderly by performing the necessary household tasks to enable them to remain at home among their family and friends, with qualified nursing and medical attendance in the home.

(4) Six regional conferences have been held under the auspices of the American Medical Association to help doctors cope with problems of the aged, and a national conference will be held in September.

The Joint Council will appraise the success of these programs and seek their application through united effort.

"The long-range aim of the council is better health for all the aged," Dr. Crosby asserted. "This can be achieved by helping everyone to prepare throughout his life for the later years. Our more immediate concern is better care for the aged who are chronically ill, and better ways to meet the financial and social problems that accompany such illness."



ASSOCIATION FORUM

OUR GROWING INVESTMENT IN HOSPITALS

(From Health Information Foundation's *Progress in Health Service*)

The capital assets of our hospitals represent significant community resources and a major part of this country's investment in health. Their value has grown considerably since early in the century, reflecting increases both in the number of hospital beds and in the average value of assets per bed.

In 1956 the total gross value of hospital assets (without subtracting debt) was about \$13 billion. Of this, about \$10.5 billion, or 80 per cent, represented physical plant (land, buildings, and equipment). These estimates probably understate the real value of our hospital resources, since, although assets are often valued at cost, it is generally recognized that replacement costs would be very much higher under current conditions.

The reported value of total hospital assets today is the equivalent of about \$8,100 for each hospital bed in this country, about \$60,000 for each physician, \$590 for each admission during the year, or \$78 for each person in the continental United States. It represents somewhat under 1 per cent of the nation's wealth.

In 1928 the value of hospital assets (in prices of that year) was estimated at just over \$3.5 billion. There was little increase during the early 1930s, but by 1947 the figure had grown to \$5.9 billion or 67 per cent above the 1928 estimate. Since 1947 the increase has been especially rapid. Current reports place the value of existing assets at 3 2/3 times the 1928 level.

Part of this increase, of course, represents merely a rise in the general price level. Thus, when this series of estimates is expressed in constant prices (in accordance with the Consumer Price Index), the value of the 1956 investment drops to just 2 1/3 times that of 1928.

Even so, for the period 1928-56 as a whole, the increase in the value of hospital assets has been more rapid than the country's population growth (over 130 per cent compared to less than 40 per cent). The rise in assets per capita over the period was 68 per cent, an annual growth rate of over 2 per cent. It was most rapid between 1947

and 1956, when it averaged about 6 per cent annually. The rate of annual increase in hospital assets has corresponded closely to similar increments in the estimated total wealth of the nation; and hospital assets have remained constant as a proportion of the total national wealth since 1928.

Between 1928 and 1947 a 28 per cent increase in existing investment was greatly overshadowed by a corresponding 57 per cent increase in number of beds. Assets per bed actually declined in value by nearly 20 per cent during the period. Since 1947, however, the reverse has been true. Assets per bed have increased sharply, by almost 60 per cent, compared to a 15 per cent increase in beds.

The increased relative value of assets per bed in the past decade stems primarily from the more adequate provision of modern, highly specialized equipment and services, many of them unknown before World War II. It also reflects the replacement of outmoded facilities.

The pattern of reported new civilian hospital and institutional construction "put in place" since 1920 generally follows that of increases in total hospital assets. For 1920-27 and 1928-34 the average annual volume of such construction was high: \$237 and \$315 million, respectively. Thereafter, because of economic depression and war, the annual average (excluding construction at Federal military installations) dropped to \$176 million in 1935-46.

Since World War II there has been a sharp increase in hospital construction. The annual average for the period 1947-54 was \$585 million, with the 1951 peak, \$821 million, the highest annual volume ever recorded. After declining somewhat in 1955 and 1956, construction rose to about \$630 million in 1957 (\$838 million in current dollars).

The sizable postwar increase is partly attributable to the Hill-Burton Act of 1946, which authorized, for the first time, Federal financial assistance for a countrywide hospital construction program based on community need. In turn, this Federal legislation stimulated state, local, and private expenditures for hospital construction. Other reasons for the increase: the gap created by the deferment of civilian construction during the war;

increased income and utilization of hospitals by the general population; and the growth of voluntary health insurance, which facilitated the use of hospitals by the public.

In the 1920s new hospital and institutional construction was divided more or less evenly between the two major sectors of ownership, private and public (governmental), with a slight advantage to private construction in the latter part of the decade. In the following decade the situation changed drastically; private hospital construction fell to a trickle, and by the late 1930s the ratio of public to private averaged better than 3 to 1.

During World War II, when all expenditures for nonmilitary hospital construction were minimal, public construction (excluding military installations) exceeded private by about two-thirds. In the postwar period, as both types of construction increased sharply, expenditures for public hospitals surpassed private through 1954. In 1955 and 1956, however, private construction exceeded public, and in 1957 this excess was about 52 per cent.

A recent stimulus to private construction was the Ford Foundation's grant of \$200 million to nonprofit hospitals in 1955, paid in 1956 and 1957. Since 1948 about half the funds needed to finance private hospital construction have come from philanthropic contributions. Recently industrial corporations, often using the foundation structure, have contributed an important and increasing share of donated capital funds.

NONPROFIT ASSETS STAND OUT

By ownership, hospital assets are almost equally divided between private and governmental sectors. Within the private sector, assets are owned primarily by nonprofit organizations (47.9 per cent of the total), while proprietary ownership accounts for only 1.7 per cent. Within the governmental sector, nonfederal units own 35.8 per cent of all hospital assets, and the Federal government owns 14.6 per cent.

Early in the century proprietary ownership of assets played a more significant role in the hospital field. But between 1928 and 1956, assets in such hospitals declined, from 7.7 to 1.7 per cent of the total. This paralleled a one-third decrease in the number of beds in proprietary hospitals (from about 75,000 to 50,000). In addition, assets per bed dropped by about one-fourth—a noteworthy fact during a period when hospitals under other types of ownership showed substantial increases. Currently, assets per bed in proprietary hospitals average only about \$4,300—a level half that for all hospitals.

In contrast, assets in Federal hospitals (including military) increased five-fold during the 1928-

1956 period. The number of beds in these hospitals tripled, while assets per bed doubled. In 1956 each bed in Federal hospitals represented over \$10,000 in assets, about 25 per cent above the average for all hospitals.

The two largest ownership categories—nonprofit and nonfederal government—have not significantly altered their share of total hospital assets between 1928 and 1956. In absolute value, both categories have increased their assets significantly.

Currently, nonfederal government hospitals provide 58 per cent of all the hospital beds in this country, but their assets per bed are relatively low—about \$5,000—partly because almost three-fourths of their beds are in psychiatric hospitals. In contrast, nonprofit hospitals, with just over one-fourth of the nation's beds, average more than \$14,000 in assets per bed, and rank high in provision of special facilities and services.

By type of service, about three-fourths of all assets, nearly \$10 billion, are currently invested in general and special hospitals. This is an increase of 147 per cent since 1928. Growth has been considerable in both number of beds and assets per bed.

In 1956 such hospitals provided less than 50 per cent of the nation's beds, but they accounted for 98 per cent of all admissions. Assets per bed were high (\$12,700), 40 per cent above 1928. Over 90 per cent of the assets in these hospitals were in short-term institutions (average stay 30 days or less), and over three-fifths of the general hospitals' assets were under nonprofit ownership.

Psychiatric hospitals, on the other hand, reported assets of \$2.7 billion in 1956, a much smaller proportion of the total, even though they provided nearly half of all beds. Assets in these hospitals have declined relative to all hospitals since 1928 (23 to 21 per cent), despite more than doubling in adjusted dollars.

Their assets per bed are currently very low (\$3,500 in 1956), with only a 6 per cent increase in value since 1928. Among all psychiatric hospitals, those under nonprofit and Federal ownership have the highest assets per bed (\$7,700 and \$5,500, respectively). Psychiatric hospitals rank low in the provision of special facilities and services, but the total number of beds in such institutions has increased by 94 per cent since 1928.

The proportion of assets in tuberculosis hospitals has also declined in relation to the total (5.9 per cent in 1928 to 4.6 in 1956), while their value in adjusted dollars has increased considerably, in this instance by 81 per cent. Beds in tuberculosis hospitals increased by one-fourth, but declined relative to the total (6.9 to 4.8 per cent). Unlike

the situation with psychiatric hospitals, most of the increase in total assets in these hospitals reflected the rise in assets per bed.

In nonprofit short-term general and special hospitals, assets per bed run proportionately higher among the larger institutions. In this category, average assets per bed in 1956 rose consistently with size, from about \$7,700 for institutions with fewer than 25 beds to over \$13,000 for those with 100-299 beds, and to nearly \$25,000 for hospitals with 500 beds or more.

Hospital assets also vary by region in the United States. The northeastern part of the country (comprising New England, Middle Atlantic and East North Central States) is the most fortunate, with \$118, \$107, and \$74 in hospital assets per capita, respectively. The East South Central States are least well-off, with an average per capita investment of only \$50.

Although the regional distribution of hospital assets per capita in 1947 was the same as that which still prevails, the relative differences between the regions have narrowed. Thus the relative increases were greatest in the West and East South Central States (87 and 86 per cent) and least in the New England States (40 per cent).

In part these differentials may be spurious, in that they reflect differences in regional land values and construction costs. They also may reflect the type of construction, the type of hospitals, the nature and timing of both new construction and improvement in hospital plant, and other factors that bear little or no relation to the adequacy of hospital plant and facilities. However, the regional distribution of hospital assets conforms generally to that of health personnel, physicians, nurses, and others.

Despite these regional variations, assets in hospitals in every part of the country have grown substantially since 1928, while simultaneously, changes have occurred in their sources of capital and patterns of ownership, and in the services they offer. This period has also been characterized by great advances in medical technology, with resulting far-reaching changes in the role of hospitals.

More and more our hospitals function as community health centers where both curative and preventive medical services are provided. Their services are increasingly utilized, with a generally higher incidence of admissions to beds than formerly, but with shorter average lengths of stay. Moreover, advances in medical science have required more complex equipment and more specialized facilities and services.

At the same time, the market for hospital services has grown. Those who use health services

most often—the very young and the aged—have increased in absolute numbers and as proportions of the total population. The health consciousness of the American people has risen; and higher income and living standards, along with the growth of voluntary health insurance have, in turn, strengthened the ability of the average person to pay for needed hospital care.

Hospitals can be expected to remain a vital part of our health picture. As a result, continuation of the present high level of hospital construction is a sound investment in the future.

HOME NURSING PLAN SEEN CUTTING MEDICAL CARE COST

Hope for shortening hospital stays by adding a period of home nursing care for patients whose earlier discharge is thereby made possible is indicated by a five-year study conducted by Associated Hospital Service of New York (Blue Cross) in cooperation with local hospitals and visiting nurse agencies, Charles Garside, chairman of the board and president, has announced.

Results of the study, published in a 67-page report, show that the combination of hospital and home nursing services as part of the Blue Cross program could reduce the costs of illness and produce other benefits for patients and the community, Mr. Garside declared.

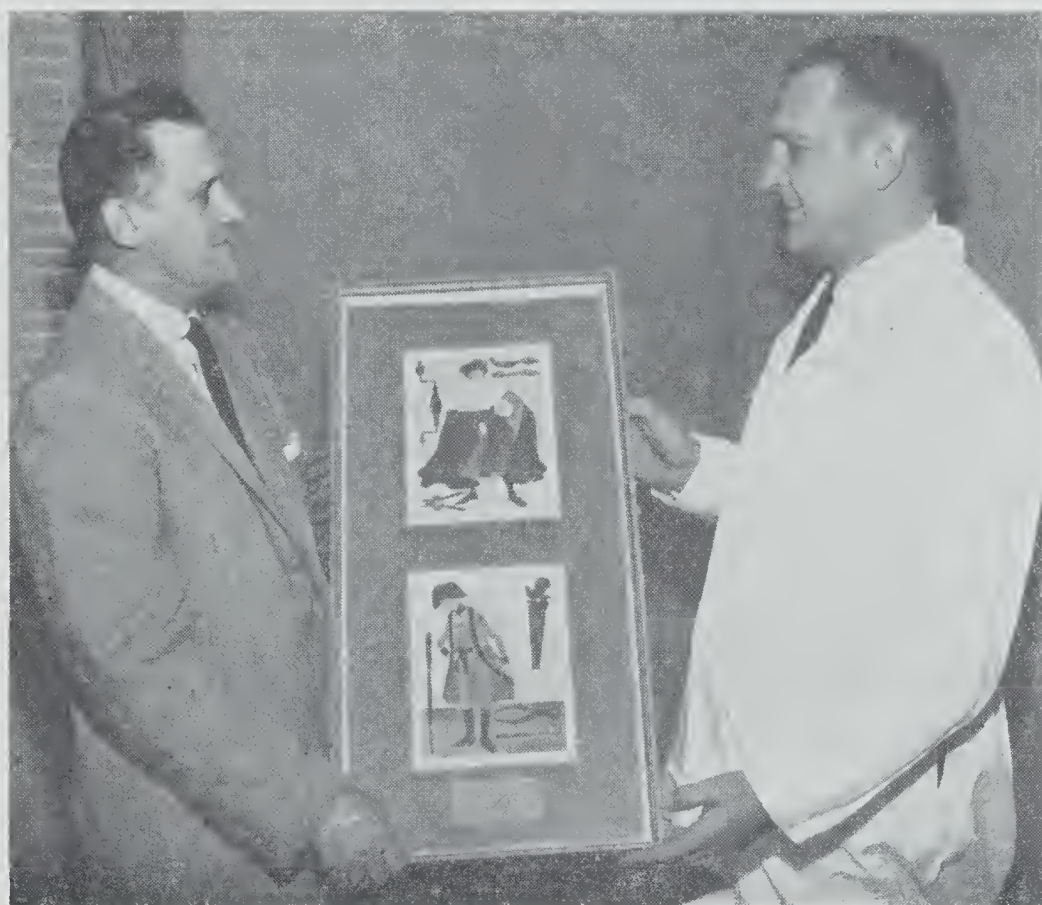
The study was based on the experience of 500 hospitalized Blue Cross subscribers who were selected by attending physicians and accepted as eligible by AHS. Early discharge from the hospital and subsequent home nursing care for these subscribers resulted in the saving of 7,948 days of hospital care, the report states. At the same time, the hospital beds so freed could have been used by more than 700 other patients for an average hospital stay of 11 days.

These figures and other statistical information based on the study show how Blue Cross funds might be used even more effectively, Mr. Garside states in a foreword to the report. A total of \$73,432 was saved by shortening of hospital stays. This amount greatly exceeds the \$25,425 which was paid by AHS for visiting nurse service.

Savings to the patients amounted to more than \$79,000, Mr. Garside explained, since most of those who participated in the project previously had received full Blue Cross benefits for 21 days of hospital care. They then were eligible for discount benefits and would have paid 50 per cent of the hospital charges in this discount period. The combined method of care was therefore most advantageous for patients with prolonged or frequent periods of illness. (*Journal of Commerce*, 1-9-58.)



MEDICAL CENTER NEWS



Shown presenting one of a series of framed watercolor drawings depicting distinctive medical garb to Dr. Robert C. Berson, dean of the University of Alabama College of Medicine (right) is William P. Hunt of Abbott Laboratories.

FRAMED DRAWINGS PRESENTED MEDICAL CENTER BY ABBOTT

A series of framed drawings representing distinctive medical garb from the time of Hippocrates to the Napoleonic era were presented to the University of Alabama Medical Center by Abbott Laboratories on April 8.

The twelve watercolor and ink drawings are based upon a series of costumes on display at the University of Rome's Institute of Medical History. They were painstakingly copied from authentic examples by Mme. Warjo Honegger-Lavater of Switzerland. Besides giving detailed examples of the costumes, Mme. Honegger-Lavater added surgical and medical instruments to her drawings.

Presenting the drawings to Dr. Robert C. Berson, dean of the University of Alabama Medical College, for Abbott Laboratories were William P. Hunt, sales manager, and H. R. Snow and E. L. Kytte, sales representatives.

The framed drawings will be used to decorate parts of the administrative offices in the Basic Science Building.

RESEARCH GRANTS AWARDED IN DEPARTMENT OF ANATOMY

The National Institutes of Health in Bethesda, Maryland have awarded research grants to members of the Department of Anatomy.

Dr. E. Carl Sensenig, professor of Anatomy, has been awarded a grant of \$27,000 for a three-year period to investigate "The Development of the Visual and Auditory Centers in Man."

Dr. Thomas E. Hunt, instructor of Anatomy, has been awarded \$18,000 for a three-year period for the "Study of Mast Cells and Basophile Leukocytes."

BRAZILIAN EXCHANGE FELLOW INSPECTS SCHOOL OF MEDICINE

Dr. F. Victor Rodrigues, the 1958 Eisenhower Exchange Fellow from Brazil, was a visitor of the University of Alabama College of Medicine the week of March 31-April 5.

The exchange fellowships are awarded in various fields of endeavor to "the most promising individuals in the free world."

Dr. Rodrigues holds several positions of prominence in Brazilian medical education. He is Medical Officer of the Brazilian Ministry of Education, professor of Gynecology at the Fluminense School of Medicine, Rio de Janeiro State, assistant professor of the National School of Medicines and vice-chairman of the Brazilian Society of Gynecology and Obstetrics.

During his tour of the United States, Dr. Rodrigues is studying the methods and organization of medical schools throughout the country, with the idea of applying this knowledge to existing medical programs in his native land.

He returns to Brazil in September, at which time he expects to become the head of Brazil's first combined Department of Gynecology and Obstetrics.

SCHOOL OF NURSING ACTIVITIES

Graduating Nurses Honored:

A buffet supper honoring the graduating seniors in the School of Nursing was given in Hillman Auditorium on May 31.

Annual Alumnae Banquet:

The University Hospital Nurses Alumnae had their annual homecoming banquet and dance honoring the graduating class of 1958 on Friday, May 16, at 6:30 p. m. at the Thomas Jefferson Hotel Ballroom.

Residence Director Retires:

The resignation of Mrs. Elizabeth Hays as residence director in the School of Nursing became effective on April 1. Mrs. Hays had been associated with the School of Nursing since May 1, 1956.

Visitor from U. S. Public Health Service:

Mrs. Helen Danley, consultant in the Department of Personnel, U. S. Public Health Service, Washington, D. C. spoke to the senior nursing students on April 3.

Alabama League for Nursing Convention:

Miss Martha Welch, instructor, Nursing of Children, and Miss Ruth Tonn, instructor, Medical Nursing, attended the Alabama League for Nursing Convention in Mobile, Alabama on April 11 and April 12.

Mrs. Janet P. Mastin, director of dietetics, Mrs. Marguerite Gonzales, divisional supervisor in Surgical Nursing, and Charles K. Hall, executive housekeeper of University Hospital attended the April 7 through April 11 meeting of the American Hospital Association Institute entitled "Planning and Working together in Dietary, Housekeeping and Nursing Department Directors" in Chicago, Illinois.

Dr. Emmett B. Carmichael, professor and chair-

man of the Department of Biochemistry, spoke at the convention banquet at the 12th National Convention of Alpha Epsilon Delta, National Premedical Honor Society, at the University of Arkansas Fayetteville.

LACK OF FUNDS FORCES REDUCTION OF JEFFERSON COUNTY PATIENTS

University Hospital's services to the sick poor of Jefferson County were curtailed by an average of 70 beds a day beginning April 1.

Action was taken after officials of the County Health Department, the City of Birmingham, citizens committee and officials of the hospital met at University Hospital to seek a solution to limited space, facilities and operating funds.

The hospital has previously received a resolution from the Jefferson County Board of Health asking the hospital to abide by state requirement to "avoid undue risks attendant to the overcrowding of beds which promotes the spread of respiratory, intestinal and skin diseases." Alabama law requires at least 60 square feet per adult bed.

The previous average of 182 beds available for the county contract patients has been cut to 112. A large segment of the reductions in admissions are in the obstetric cases, of which 85 per cent are Negro. As of April 8 the hospital has put a ban on the admission of obstetric cases which have not visited the prenatal clinic at least three times prior to delivery.

BLOOD BANK APPROVED

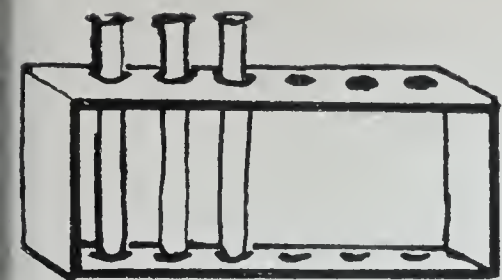
The University Hospital and Hillman Clinic Blood Bank has been approved for membership in the American Association of Blood Banks. Dr. Stephen D. Palmer is director of the Blood Bank.

DR. FROMMEYER SPEAKS AT HEART MEETING

Dr. Walter B. Frommeyer, chairman of the Department of Medicine, was a featured speaker at the Southern Regional Meeting of the American Heart Association in Roanoke, Virginia, April 9 through April 10.

Representatives of the Alabama Heart Association who accompanied Dr. Frommeyer were Dr. William H. Block, past president; Mrs. W. I. Logue, secretary; Miss Margaret Cotten, executive director; and Mrs. Virginia Wrigley, field secretary.

The meeting was attended by key personnel of heart associations in Florida, Georgia, Tennessee, Louisiana, Mississippi, North and South Carolina, Texas, Virginia, West Virginia, and Alabama.



STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.

State Health Officer

FALSE PROMISES OF CANCER CURE

Much can be done for many cases of cancer today. The ones that are found early can be treated by medical doctors with demonstrated, effective methods. These "tried and true" ways are surgery and x-ray or other types of irradiation. The use of these means has meant that many people can join the "Cured Cancer Club" in their community. There are such organizations set up in various localities today, and there are eligible candidates who join them.

Does the person who believes in false promises of cancer cure, and who resorts to such treatment, have the same chance for recovery? Assuredly not; in fact, his chances lessen sometimes noticeably every day he postpones receiving competent and rational treatment.

The attention of the public has only recently been called to one such false promise of cancer cure. The Food and Drug Administration, early in April 1956, issued a public warning that the so-called Hoxsey treatment for internal cancer has been found on the basis of evidence to be a worthless treatment. After superficial and inadequate examination in one of two clinics—one in Texas and the other in Pennsylvania—the patient is given one of a variety of pills or liquids. These "cancer medicines" have been claimed to be "effective in curing internal cancer." However, the Food and Drug Administration, the National Cancer Institute of the U. S. Public Health Service, as well as the United States Court of Appeals for the Fifth Circuit (at Dallas, Texas), have found otherwise. Not a single verified cure of internal cancer due to use of this treatment has been found after long study. Rather, the Food and Drug Administration reports that one ingredient of all of the "cancer medicines" actually accelerates or speeds the growth of some cancers.

Everyone concerned with the Hoxsey clinics and the treatment have been enjoined by court order from shipping their worthless cancer medicines in interstate commerce with labeling representing, suggesting or implying that the products are effective in the treatment of any type of internal cancer. Thus, violations of this order will be prosecuted. In the meantime, the Food and Drug

Administration's warning was designed to protect cancer victims who might have planned to take the treatment.

Public health agencies and others have long been concerned with the tragic delay involved in the patronage of quack healers by some individuals. The problem has been particularly frustrating in cancer cases. When the detour to a non-medical practitioner occurs during the early stages of this disease, it often becomes the deciding factor between control of the disease and fatality. Although most if not all states have laws forbidding the practice of medicine by nonmedical practitioners, such offenders continue to exist even in areas where there is constant vigilance to ferret them out. Moreover, it is not always easy to determine who the offenders are.

Given this setting, a recent article, "Why Do People Detour to Quacks?" in the *Psychiatric Bulletin* is especially timely. The article reports on a preliminary investigation of a sample of 20 patients who detoured to nonmedical sources when cancer was suspected. The investigation was designed to determine the factors involved in such detouring behavior, as well as to answer other pertinent questions.

To begin with, the investigation indicated that there are four categories of patients who seek non-medical treatment. In the words of the report, "There are the miracle seekers, the uninformed, the restless ones and the straw-graspers." Furthermore, the investigation revealed that these four groups may detour prior to, during or following orthodox medical care. The miracle seekers—persons who look for a sure cure overnight—and the uninformed were the groups who were most likely to go to the quack first, and the doctor later. On the other hand, the "restless" category included the individuals who went first to doctors, then to nonmedical healers and then returned for medical treatment. Finally, the straw-graspers turned to quacks only after receiving treatment from physicians.

The names given to the four groups of the quacks' patrons are in themselves revealing. However, the report elaborates still further with specific examples of each type. The miracle seeker is typified by a Negro woman who sent for a prayer cloth when she realized she had cancer of the breast. For six long, important months, she depended on the prayer cloth to remove, somehow,

the mass in her breast. When, finally, she did attend a cancer clinic, her disease had progressed to the uncontrollable stage. The x-ray machines which were used—in vain—were mysterious to the woman who clung to the belief that the prayer cloth failed to remove the cancer because of her sins!

The uninformed group most often included persons with little education, the survey found. However, there were some exceptions. The case of an intelligent, 42-year-old man is cited. Although he had finished high school and had taken a business course, he maintained that he did not know the difference between a licensed medical doctor and others who call themselves "doctor." His only experience with hospitals and doctors was a tonsillectomy in childhood. "I went to this man because I heard he was good with cancers," according to his own matter-of-fact statement!

The restless individuals who detoured to quacks, only later to return for orthodox medical treatment, grew impatient or dissatisfied with one or more aspects of accepted medical practice. One man, age 53, failed to understand the necessity for the customary two-week diagnostic period. This is the amount of time it takes some clinics to run the series of laboratory tests needed for an accurate analysis of the particular patient's case. No treatment whatsoever is started before this preliminary work is done. Before this particular man's tests were completed, he stopped going to the clinic and went, instead, to a healer who gave him treatment within an hour. When he returned to the cancer clinic several months later, he remarked to clinic personnel it took so long to get anything done at the clinic he became impatient.

Still another example of the restless type was the adult man of 46 whose doctor recommended surgical treatment for his cancer. He backed away from the very thought of the surgeon's knife, and sought, rather, the help of a man who recommended only "pills and ointment."

The so-called straw-graspers endanger their health perhaps least of all the groups which patronize quack healers. These are the patients whose diseases—in the case of cancer—have reached the terminal stage. They are the ones whose doctors have told them, reluctantly, "We have done all that we can, all that medical science at the present time knows to do." And they are also the people who feel that they must continue to do something, try anything. The mother of a three-year-old child told of taking her little girl to a man she heard was successful with his treatment: a series of shots for cancer. "... I had to know that I had done every thing humanly possible to save her," she explained. The *Psychiatric Bulletin* article does not tell us the outcome of this

particular case. But of this we can be sure: to date, there are in existence no miracle shots or injections which will cure cancer!

With the experience of these patients of quack healers fresh in our minds, let's take a look at the way in which the nonmedical practitioner operates. How can the fact that he draws patients to him, despite the evidence that his treatment is far from medically effective, be explained? First of all, the quack's approach to cancer, as well as to other ailments, is a positive one. His explanation of the cause of cancer is a good example. "Tumors result from the loss of control of the innate intelligence of certain parts and functions of the body," he maintains, with finality. It must be said that such an answer makes little sense or none at all to the average person. But to at least some of the quack's patients—obviously—it has more meaning than the doctor's explanation.

Cancer research men continue to work around the clock to find, if they can, the answer to why certain tissues in the bodies of some individuals develop into malignant growths, which often spread to other body areas. When some or all of these answers are found, the researchers will be well on their way to discovering additional means of destroying such growths and preventing their spread. In the meantime, doctors readily admit that they do not know all the answers to questions regarding this disease which wipes out so many lives each year.

This, then, is the situation: scientific research and orthodox medicine, on the one hand, with treatment which is effective in many cases, and especially helpful for the patients whose cancer is discovered and treated in the early stages. The quack with his approach and lack of effectiveness stands at the other end of the pole: none of his "quick cures" can come out on top when submitted to rigid scientific tests of their usefulness. And yet, because he is so positive that he knows all the right answers, he is able to convince some individuals that he can, indeed, help them. The gullible people whom the quack does succeed in luring into his trap waste their money, because the nonmedical practitioner, whatever else he can do, cannot cure a true case of cancer with the means at his command. But far more important than the money involved is the time that is slipping by, when disease in the early stage and when it responds most frequently and readily to orthodox medical treatment at the hands of a licensed doctor.

For all the questions of the practical man, the quack has ready answers. One question often put to the nonmedical healer is "How can one form of treatment be so beneficial for so many types of ailments?" And the quack's answer—not the real

answer, that it cannot—comes back as positive as before, “When injected into the body, these medicines enable the body to produce its own defense mechanism and thus bring about a curative action.” Here we have a pleasant theory, but it is only that and nothing more. It simply does not and will not work. Much as the human race would like a panacea for all its ills, one has not been discovered. What the quack has really done is to oversimplify or perhaps modify the vaccine principle, which does work. A vaccination consists of injecting into the human body a small quantity of dead or weakened, live germs or viruses. These germs result in a mild case of a particular disease, and thus help the body to build antibodies to defend itself against the real disease. But the vaccination must be specific: typhoid vaccine to confer immunity against typhoid fever, and smallpox vaccine to fight smallpox. No public health department or doctor would think of giving a person typhoid vaccination, for example, to protect him against smallpox. For experience has shown that such a practice does not work.

In summary, the harm that nonmedical practitioners do can perhaps best be shown by repeating here the scathing denunciation of quackery issued by a judge in a Chicago federal court several years ago. As reprinted in the *Journal of the American Medical Association*, his words, directed against a particular group of healers and their treatment, were in part:

“You have imposed on the poor sick, who in their anxiety for relief would try anything at any price. You have fooled the trusting, the credulous and the gullible. The quackery you have employed is more despicable because those who were deceived into believing in your fake remedy failed to pursue the treatment proved by medical science to be effective in preventing and curing disease. The credulous belief in efficacy of your useless product is the greatest danger inherent in quackery. It discourages and prevents those who use it from seeking proper medical treatment and the results of such neglect are often fatal. . . The law-enforcing agencies should be diligent in protecting the public from the conduct of these charlatans.”

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director

SPECIMENS EXAMINED

March 1958

Examinations for diphtheria bacilli and Vincent's	139
Agglutination tests	506
Typhoid cultures (blood, feces and urine)	468
Typhoid cultures	6
Examinations for malaria	37
Examinations for intestinal parasites	2,809
Darkfield examinations	3

Serologic tests for syphilis (blood and spinal fluid)	26,866
Examinations for gonococci	1,550
Examinations for tubercle bacilli	3,970
Examinations for Negri bodies (smears and animal inoculations)	250
Water examinations	1,978
Milk and dairy products examinations	3,820
Miscellaneous examinations	661
Total	43,063

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BUREAU OF PREVENTABLE DISEASES

W. H. Y. SMITH, M. D., Director

CURRENT MORBIDITY STATISTICS

1958

	Feb.	Mar.	E. E.* Mar.
Typhoid and paratyphoid	4	2	3
Undulant fever	0	0	2
Meningitis	14	13	17
Scarlet fever	808	1182	44
Whooping cough	21	20	54
Diphtheria	0	3	12
Tetanus	1	4	2
Tuberculosis	142	195	203
Tularemia	1	0	2
Amebic dysentery	2	6	2
Malaria	0	0	0
Influenza	4845	5943	1352
Smallpox	0	0	0
Measles	422	1557	761
Poliomyelitis	3	0	3
Encephalitis	0	2	1
Chickenpox	442	394	396
Typhus fever	0	0	1
Mumps	219	318	222
Cancer	1026	986	374
Pellagra	0	0	1
Pneumonia	382	428	335
Syphilis	92	117	271
Chancroid	3	3	9
Gonorrhea	244	250	350
Rabies—Human cases	0	0	0
Positive animal heads	9	28	0

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	Mar.	Apr.	E. E.* Apr.
Typhoid and paratyphoid	2	0	5
Undulant fever	0	0	2
Meningitis	13	9	8
Scarlet fever	1182	942	46
Whooping cough	20	41	69
Diphtheria	3	1	10
Tetanus	4	4	1
Tuberculosis	195	154	201
Tularemia	0	2	1
Amebic dysentery	6	4	6
Malaria	0	0	0
Influenza	5943	1039	1048
Smallpox	0	0	0
Measles	1557	2142	1153
Poliomyelitis	0	2	3
Encephalitis	2	2	1
Chickenpox	394	243	307
Typhus fever	0	0	2
Mumps	318	192	229
Cancer	986	717	381
Pellagra	0	0	1
Pneumonia	428	289	271
Syphilis	117	98	195
Chancroid	3	4	7
Gonorrhea	250	261	338
Rabies—Human cases	0	0	0
Positive animal heads	28	18	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

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